ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
1	34443	Alaka'i Technologies Corporation	Annex to Participation in the NASA AAM National Campaign	10/2/2020	10/2/2025	Non-Reimbursable	\$592,104	AFRC
2	34442	Alaka'i Technologies Corporation	Participation in the NASA AAM National Campaign	10/2/2020	10/2/2025	Non-Reimbursable	\$0	AFRC
3	34439	Wisk Aero, LLC	AAM National Campaign - 1 Vehicle Provider Information Exchange Annex	10/22/2020	10/22/2025	Non-Reimbursable	\$592,104	AFRC
4	34436	Wisk Aero, LLC	Participation in the NASA AAM National Campaign	10/22/2020	10/22/2025	Non-Reimbursable	\$0	AFRC
5	33089	Bell Textron, Inc	Annex to Hybrid-Electric System Integration, Development and Testing Activities	1/15/2020	8/8/2024	Non-Reimbursable	\$592,104	AFRC

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
6	33088	The Boeing Company	Grand Challenge Vehicle Provider Information Exchange Annex	2/28/2020	2/28/2025	Non-Reimbursable	\$592,104	AFRC
7	33087	The Boeing Company	Participation in the NASA UAM Grand Challenge	2/28/2020	2/28/2025	Non-Reimbursable	\$0	AFRC
8	33085	Zeva, Inc (dba Zeva Aero)	Grand Challenge Vehicle Provider Information Exchange Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$592,104	AFRC
9	33084	Zeva, Inc (dba Zeva Aero)	Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC
10	33081	The University of North Texas	Grand Challenge - Development Test Airspace Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$678,932	AFRC

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
11	33080	The University of North Texas	Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC
12	33079	Uber Technologies, Inc	Grand Challenge - Development Test Airspace Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$678,932	AFRC
13	33078	Uber Technologies, Inc	Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC
14	33076	Prodentity, LLC	Grand Challenge Vehicle Provider Information Exchange Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$592,104	AFRC
15	33075	Prodentity, LLC	Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
16	33073		Grand Challenge - Development Test Airspace Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$678,932	AFRC
17	33072		Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC
18	33065	NFT, Inc	Grand Challenge Vehicle Provider Information Exchange Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$592,104	AFRC
19	33064	NFT, Inc	Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC
20	33063	Metron Aviation, Inc	Grand Challenge - Development Test Airspace Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$678,932	AFRC

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
21	33062		Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC
22	33059		Grand Challenge - Development Test Airspace Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$678,932	AFRC
23	33058		Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC
24	33057		Grand Challenge - Development Test Airspace Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$678,932	AFRC
25	33056		Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
26	33055	Avision, Inc	Grand Challenge - Development Test Airspace Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$678,932	AFRC
27	33054	Avision, Inc	Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC
28	33039	ARINC	Grand Challenge - Development Test Airspace Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$678,932	AFRC
29	33038	ARINC	Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC
30	33037	ANRA TECHNOLOGIES, LLC	Grand Challenge - Development Test Airspace Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$678,932	AFRC

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
31	33036		Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC
32	33035		Grand Challenge - Development Test Airspace Annex	3/2/2020	3/2/2025	Non-Reimbursable	\$678,932	AFRC
33	33034		Participation in the NASA UAM Grand Challenge	3/2/2020	3/2/2025	Non-Reimbursable	\$0	AFRC
34	33033	AIRMAP, INC	Participation in the NASA UAM Grand Challenge - Development Test Airspace Annex	2/3/2020	2/3/2025	Non-Reimbursable	\$678,932	AFRC
35	33032	AIRMAP, INC	Participation in the NASA UAM Grand Challenge	2/3/2020	2/3/2025	Non-Reimbursable	\$0	AFRC

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
36	33031	JOBY AVIATION, INC	Grand Challenge - Development Test Flight Annex	2/19/2020	2/19/2025	Non-Reimbursable	\$592,104	AFRC
37	33030	JOBY AVIATION, INC	Participation in the NASA UAM Grand Challenge	2/19/2020	2/19/2025	Non-Reimbursable	\$0	AFRC
38	32757	AeroVironment, Inc.	Small Unmanned Aircraft System (SUAS)Testing and Training	11/10/2020	11/10/2025	Reimbursable		AFRC
39	32489	Virgin Galactic Holdings	Collaborative Medical Device Development in Response to COVID-19 Pandemic	4/22/2020	4/22/2023	Non-Reimbursable	\$0	AFRC
40	32339	Fenix Space, Inc.	Supporting Development of a Tow-glider Launch Platform through Aerodynamic Store Separation Analysis, Range Safety Studies, and Con-Ops Development	5/27/2020	5/27/2025	Reimbursable		AFRC

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41	32338	Fenix Space, Inc.	Development of Tow-glider Launch Platform	5/27/2020	5/27/2025	Reimbursable		AFRC
42	32162	Learjet, Inc	Flight Test Support of Global 7500 Business Jet	5/17/2021	5/17/2022	Reimbursable		AFRC
43	32161	Learjet, Inc	Business Jet Flight Test Support	5/17/2021	5/17/2026	Reimbursable		AFRC
44	31875	Stratolaunch, LLC	Annex to Support Flight Operations of the Stratolaunch Carrier Aircraft	6/18/2020	2/13/2025	Reimbursable		AFRC
45	31694	Stratolaunch, LLC	To Support Flight Operations of the Stratolaunch Carrier Aircraft	2/13/2020	2/13/2025	Reimbursable		AFRC

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
46	31693	Stratolaunch, LLC	To Support Flight Operations of the Stratolaunch Carrier Aircraft	2/13/2020	2/13/2025	Reimbursable		AFRC
47	31588	II OCKNOOD WISTIN	Annex to NASA ER-2 Low Power Laser Demonstrator (LPLD)	1/8/2020	11/27/2022	Reimbursable		AFRC
48	31026	Northrop Grumman	Reimbursable Space Act Agreement between Northrop Grumman Systems Corporation and the National Aeronautics and Space Administration, NASA Armstrong Flight Research Center for support of flight research related to aeroelasticity	2/6/2020	2/6/2023	Reimbursable		AFRC
49	30284	General Electric Aviation	General Electric Aviation Use of NASA SOFIA B747 Flight Simulator	5/8/2019	5/8/2024	Reimbursable		AFRC
50	29919	Scaled Composites	For Use of NASA SOFIA B747 Flight Simulator	3/21/2019	3/21/2022	Reimbursable		AFRC

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51	29252	The Boeing Company	Annex to Aerospace Research Development	4/5/2019	2/3/2022	Non-Reimbursable	\$699,161	AFRC SAA1-23831
52	28763	Echodyne Corporation	Resilient Autonomy Collaboration	9/25/2019	11/25/2021	Non-Reimbursable	\$11,036	AFRC
53	28157	ZIVA CORP	M-DART Demonstration Program	8/16/2018	8/16/2021	Reimbursable		AFRC
54	27967	AEROVIRONMENT, INC	Unmanned Aircraft Systems (UAS) Testing	11/14/2018	11/14/2023	Reimbursable		AFRC
55	27347	Modern Technology Solutions, Inc.	Collaborative development of contingency management for autonomous aircraft	8/6/2018	12/6/2021	Non-Reimbursable	\$374,127	AFRC

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
56	26975	Bell Textron, Inc	Hybrid-Electric System Integration, Development and Testing Activities	8/8/2019	8/8/2022	Non-Reimbursable	\$1,519,555	AFRC
57	26974	Bell Textron, Inc	Hybrid-Electric System Integration, Development and Testing Activities	8/8/2019	8/8/2024	Non-Reimbursable	\$0	AFRC
58	25826	Raytheon Company	For Use of NASA SOFIA B747 Flight Simulator	6/22/2017	6/22/2022	Reimbursable		AFRC
59	25811	Lockheed Martin	NASA ER-2 Low Power Laser Demonstrator (LPLD)	11/27/2017	11/27/2022	Reimbursable		AFRC
60	25562	Safety Technology Holdings, Incorporated	Reimbursable Space Act Agreement to support the test setup and evaluation of the FOSS technology in anthropomorphic test device.	12/7/2017	12/7/2022	Reimbursable		AFRC

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE SIGNATURE	EDATE EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
61		TriTech Small Business Development Center	Annex to Non-Reimburseable Space Act Agreement with TriTech SBDC for Small Business Innovation Research/Small Business Technology Transfer assistance	4/17/2022	Non-Reimbursable	\$5,160	AFRC
62	1//5//	TriTech Small Business Development Center	Annex to Non-Reimburseable Space Act Agreement with TriTech SBDC for Regional Economic Development 4/17/2017	4/17/2022	Non-Reimbursable	\$7,313	AFRC
63	173718	TriTech Small Business Development Center	Non-Reimburseable Space Act Agreement with TriTech SBDC for Regional Economic Development, including Technology Transfer assistance	4/17/2022	Non-Reimbursable	\$2,733	AFRC
64	172/1/		Non-Reimburseable Space Act Agreement with TriTech SBDC for Regional Economic Development, including Technology Transfer and Small Business Innovation Research/Small Business Technology Transfer Assistance	4/17/2022	Non-Reimbursable	\$0	AFRC
65	23205	Lockheed Martin Aeronautics Company	Develop Cost Estimate of Proposed Tests 4/24/2017	4/24/2022	Reimbursable		AFRC

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66	23204	Lockheed Martin Aeronautics Company	Testing Support of Lockheed Martin Test Articles	4/24/2017	4/24/2022	Reimbursable		AFRC
67	23109	Battelle Memorial Institute	Development of an Ice Prevention System	11/17/2016	11/17/2021	Reimbursable		AFRC
68	23044	Cal Poly Pomona Foundation, Inc	Non-Reimburseable Space Act Agreement Between Cal Poly Pomona Foundation, Inc. to Evaluate, Prototype, and Conduct Market Research on Technologies available for licensing within the Intellectual Property Portfolio	1/5/2017	1/5/2022	Non-Reimbursable	\$3,918	AFRC
69	21777		Non-Reimburseable Space Act Agreement Between Cal Poly Pomona Foundation, Inc. to Evaluate, Prototype, and Conduct Market Research on technologies within the Technology Transfer Patent Portfolio	1/5/2017	1/5/2022	Non-Reimbursable	\$0	AFRC
70	21370	Sands Aviation LLC	For Use of NASA SOFIA B747 Flight Simulator	9/30/2015	10/31/2021	Reimbursable		AFRC

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71	34521	Avision, Inc.	Nonreimbursable Space Act Agreement between NASA Ames Research Center and Avision, Inc for Scalable Traffic Management for Emergency Response Operations (STEReO)	4/27/2026	Non-Reimbursable	\$1,273,460	ARC	SAA2-403618
72	34471	General Electric Company	Annex One under Non-Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and General Electric Company for Safety Assurance of Flight Critical Systems	5/20/2024	Non-Reimbursable	\$475,075	ARC	SAA2-403615-1
73	34470	General Electric Company	Non-Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and General Electric Company for Safety Assurance of Flight Critical Systems	5/20/2026	Non-Reimbursable	\$0	ARC	SAA2-403615
74	34263	The Boeing Company	Annex 2 under Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and the Boeing Company for Wind Tunnel Testing 4/27/2021	4/27/2022	Reimbursable		ARC	SAA2-403460-2
75	34262	Northrop Grumman Corporation	Annex Two to the Reimbursable Space Act Umbrella Agreement between NASA Ames Research Center and Northrop Grumman Corporation for Wind Tunnel Testing	4/28/2022	Reimbursable		ARC	SAA2-403514-2

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE SIG	IGNATURE DATE	EXPIRATION DATE	I V P P C I P P P P P P P P P P P P P P P P	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
76	34243	Founder Institute, Incorporated	Annex Two to Nonreimbursable Space Act Umbrella Agreement between the National Aeronautics and Space Administration Ames Research Center and Founder Institute, Incorporated for Phase 2 - Founder Institute Advanced Technology Accelerator Program	20/2021	11/19/2022	Non-Reimbursable	\$21,502	ARC	SAA2-403517-2
77	34095	Chabot Space & Science Center	Annex One to Non-Reimbursable Umbrella Interagency Agreement between NASA ARC and the Chabot Space and Science Center for Framework on Regional Partnership	8/2021	2/8/2023	Non-Reimbursable	\$2,400,475	ARC	SAA2-403607-1
78	34094	Chabot Space & Science Center	Non-Reimbursable Umbrella Interagency Agreement between NASA Ames Research Center and the Chabot Space and Science Center for Framework on Regional Partnership	8/2021	2/8/2026	Non-Reimbursable	\$0	ARC	SAA2-403607
79	33913	KAI, LLC	Non-Reimbursable Space Act Agreement between NASA Ames Research Center and KAI, LLC for the Development of Flexible Thermal Protection Systems Materials	19/2021	2/19/2023	Non-Reimbursable	\$13,524	ARC	SAA2-403603
80		Astranis Space Technologies Corporation	Reimbursable Space Act Agreement between NASA Ames Research Center and Astranis Space Technologies Corporation for Spacecraft Hardware Testing Support at the Engineering Evaluation Laboratory	5/2021	1/5/2022	Reimbursable		ARC	SAA2-403599

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81 33289	Rocket Lab USA	Annex One under NRUSAA between NASA ARC and Rocket Lab for Space Science, Earth Science, and Engineering Research	10/14/2020	4/14/2022	Non-Reimbursable	\$79,329	ARC	SAA2-403591-1
82 33288	Rocket Lab USA	Non-Reimbursable Umbrella Space Act Agreement between NASA ARC and Rocket Lab for Space Science, Earth Science, and Engineering Research	10/14/2020	10/14/2025	Non-Reimbursable	\$0	ARC	SAA2-403591
83 33148	Stanford Blood Center	Non-Reimbursable Space Act Agreement between NASA Ames Research Center and Stanford Blood Center for Blood Drives	10/6/2020	10/6/2025	Non-Reimbursable	\$12,568	ARC	SAA2-403588
84 33083	Virgin Orbit	Annex One under Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Virgin Orbit, LLC for Analysis and Simulation of a Transport Aircraft as a Launch Platform	10/6/2020	10/6/2021	Reimbursable		ARC	SAA2-403586-1
85 33082	Virgin Orbit	Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Virgin Orbit, LLC for Supporting the Maturation of Virgin Orbit's Air-Launched Vehicle System	10/6/2020	10/6/2025	Reimbursable		ARC	SAA2-403586

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86	33061	Sentinel Healthcare Corporation	Annex One under NonReimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Sentinel Healthcare for a Data-Driven Pandemic Response Management System	9/8/2020	9/8/2022	Non-Reimbursable	\$10,816	ARC	SAA2-403585-1
87	33060	Sentinel Healthcare Corporation	NonReimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Sentinel Healthcare for a Data- Driven Pandemic Response Management System (COVID-19)	9/8/2020	9/8/2025	Non-Reimbursable	\$0	ARC	SAA2-403585
88	33001	Physics Applications, Inc.	Reimbursable Space Act Agreement between NASA Ames Research Center and Physics Applications Inc for Light Gas Gun Performance Code ONEDIM: Implementation of Weighted Piston Simulation Capability	3/8/2021	3/8/2022	Reimbursable		ARC	SAA2-403583
89	33000	Lawrence Livermore National Security, LLC	Annex 1 under Reimbursable Umbrella Space Act Agreement between NASA ARC and Lawrence Livermore National Security, LLC for Technical Support in the Utilization of CBAero and Cart3D	1/13/2021	1/13/2022	Reimbursable		ARC	SAA2-403582-1
90	32994	Lawrence Livermore National Security, LLC	Annex Two under RUSAA between NASA ARC and Lawrence Livermore National Security, LLC for Ames Vertical Gun Range Testing for Fundamental Physics	4/5/2021	4/5/2022	Reimbursable		ARC	SAA2-403582-2

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91	32993	Lawrence Livermore National Security, LLC	Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Lawrence Livermore National Security, LLC for Aerospace Research and Testing Activities	1/13/2021	1/13/2026	Reimbursable		ARC	SAA2-403582
92	32992	Purdue University	Annex One under Non-Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Purdue University for Research and Development in Aerospace, Earth Science, and Aviation Systems	12/15/2020	12/15/2025	Non-Reimbursable	\$96,476	ARC	SAA2-403581-1
93	32991	Purdue University	Non-Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Purdue University for Research and Development in Aerospace, Earth Science, and Aviation Systems	12/15/2020	12/15/2025	Non-Reimbursable	\$0	ARC	SAA2-403581
94	32905	California Polytechnic State University	Annex One to Non-reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and California Polytechnic State University for Space Exploration, Science and Engineering Research, and STEM Initiatives		6/20/2024	Non-Reimbursable	\$96,152	ARC	SAA2-403539-1
95	32865	California Department of Forestry and Fire Protection	Non-Reimbursable Space Act Agreement between NASA Ames Research Center and California Department of Forestry and Fire Protection (CAL FIRE) for Scalable Traffic Management for Emergency Response Operation (STEREO)	4/5/2021	4/5/2026	Non-Reimbursable	\$1,892,439	ARC	SAA2-403576

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96	32859	Small Payload Ride Share Association	Non-Reimbursable Space Act Agreement between NASA ARC and Small Payload Ride Share Association for Co-hosting the 20th Annual Small Payload Ride Share Virtual Symposium	7/28/2020	7/28/2021	Non-Reimbursable	\$56,212	ARC	SAA2-403575
97	32736	NISSAN NORTH AMERICA, INC	Annex 2 under RUSAA between NASA ARC and Nissan North America for Research and Development in Robotic Technologies	6/12/2020	6/12/2022	Reimbursable		ARC	SAA2-403545-2
98	32699	University of Colorado Boulder	Annex 1 to the Non-Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and University of Colorado for Exploration, Development, and Testing of High Temperature Materials for Hypersonics		4/19/2026	Non-Reimbursable	\$186,242	ARC	SAA2-403529-1
99	32613	Khaled bin Sultan Living Oceans Foundation	Non-Reimbursable Space Act Agreement between NASA Ames and Khaled bin Sultan Living Oceans Foundation for Sharing Data to Improve Benthic Habitat Map	5/15/2021	5/15/2026	Non-Reimbursable	\$126,200	ARC	SAA2-403568
100	32577	Delta Airlines	Non-Reimbursable Space Act Agreement between NASA Ames and Delta Airlines, Inc. for Human Factors Fatigue Research	11/24/2020	11/24/2025	Non-Reimbursable	\$740,892	ARC	SAA2-403566

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101	32574	VERDIGRIS TECHNOLOGIES, INC	Nonreimbursable Space Act Agreement between Verdigris Technologies, Inc. and NASA Ames Research Center for Advanced Sensing and Health Management for Sustainable Habitats	1/27/2026	Non-Reimbursable	\$182,296	ARC	SAA2-403565
102	32524	San Jose State University	Annex One under Non-reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and San Jose State University for Space Exploration, Science and Engineering Research, and STEM Initiatives	2/18/2026	Non-Reimbursable	\$93,399	ARC	SAA2-403536-1
103		MOFFETT FIELD HISTORICAL SOCIETY	Reimbursable Space Act Agreement between NASA Ames Research Center and Moffett Field Historical Society to Support the History of Moffett Field	6/29/2025	Reimbursable		ARC	SAA2-403562
104		County of Santa Clara Office of the Sheriff	Reimbursable Space Act Agreement between NASA Ames and the County of Santa Clara Office of the Sheriff for Utilization of Moffett Field for Law Enforcement and Emergency Response Capabilities	9/30/2025	Reimbursable		ARC	SAA2-403555
105	32295	American Airlines	Annex One under NonReimbursable Umbrella Space Act Agreement between NASA Ames Research Center and American Airlines for Collaborative Research to Improve Aviation Safety	3/1/2024	Non-Reimbursable	\$1,789,221	ARC	SAA2-403551-1

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106	32294	American Airlines	NONREIMBURSABLE SPACE ACT UMBRELLA AGREEMENT BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER AND AMERICAN AIRLINES FOR COLLABORATIVE RESEARCH TO IMPROVE AVIATION SAFETY		3/1/2026	Non-Reimbursable	\$0	ARC	SAA2-403551
107	32210	SAN JOSE STATE UNIVERSITY	Non-reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and San Jose State University for Space Exploration, Science and Engineering Research, and STEM Initiatives		2/18/2026	Non-Reimbursable	\$0	ARC	SAA2-403536
108	32209	California Polytechnic State University	Non-reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and California Polytechnic State University for Space Exploration, Science and Engineering Research, and STEM Initiatives	6/20/2021	6/20/2026	Non-Reimbursable	\$0	ARC	SAA2-403539
109	32147	Exo-Atmospheric Technologies, LLC	Reimbursable Space Act Agreement between NASA ARC and Exo-Atmospheric Technologies, LLC for ARC Jet Testing of Advanced Instrumentation in Hypersonic Environments	8/20/2020	8/20/2021	Reimbursable		ARC	SAA2-403547
110	32119	The Spaceship Company	Reimbursable Space Act Agreement between NASA Ames Research Center and The Spaceship Company, LLC for Simulation and Analysis of a Transport Aircraft as a Launch Platform	10/7/2020	10/7/2021	Reimbursable		ARC	SAA2-403543

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111	31973	NISSAN NORTH AMERICA, INC	Annex 1 between NASA ARC and Nissan North America for Distributed Robotics Technology and Integrated Systems	6/12/2020	6/12/2022	Reimbursable		ARC	SAA2-403545-1
112	31972	NISSAN NORTH AMERICA, INC	Reimbursable Umbrella Space Act Agreement between NASA ARC and Nissan North America for Research and Development in Robotic Technologies	6/12/2020	6/12/2025	Reimbursable		ARC	SAA2-403545
113	31897	Arizona State University	Annex One to NRUSAA between NASA ARC and Arizona State University for Technology Transfer Academia Infusion		5/21/2025	Non-Reimbursable	\$62,883	ARC	SAA2-403530-1
114	31896	Arizona State University	Non-reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Arizona State University for Space Exploration, Science and Engineering Research, and STEM Initiatives	5/21/2020	5/21/2025	Non-Reimbursable	\$0	ARC	SAA2-403530
115	31890	UNIVERSITY OF COLORADO BOULDER	Non-reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and the University of Colorado at Boulder for Space Exploration, Science and Engineering Research, and STEM Initiatives	4/19/2021	4/19/2026	Non-Reimbursable	\$0	ARC	SAA2-403529

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116	31848	SPACE SYSTEMS LORAL, LLC	Annex 1 to Nonreimbursable Umbrella Space Act Agreement between NASA ARC and Space Systems Loral for Robotic and Spacecraft Technology Research	4/16/2020	4/16/2023	Non-Reimbursable	\$62,229	ARC	SAA2-403528-1
117	31847	SPACE SYSTEMS LORAL, LLC	Reimbursable Umbrella Space Act Agreement between NASA ARC and Space Systems Loral for Robotic and Spacecraft Technology Research	4/16/2020	4/16/2025	Non-Reimbursable	\$0	ARC	SAA2-403528
118	1317XX	STATE OF CALIFORNIA, Department of Parks	Reimbursable Space Act Agreement between NASA Ames Research Center and State of California, Department of Parks, Division of Boating and Waterways for Utilization of Remote Sensing Tools in Aquatic Weed Management in the California Delta		2/19/2024	Reimbursable		ARC	SAA2-403526
119	31732	University of Guam	Reimbursable Space Act Agreement between NASA Ames Research Center and the University of Guam for Mapping of Guam's Priority Coral Reefs	5/15/2021	5/15/2022	Reimbursable		ARC	SAA2-403524
120	31474	Uber Technologies Inc	Annex between the National Aeronautics and Space Administration Ames Research Center and Uber Technologies Inc under Space Act Umbrella Agreement No. 27889, SAA2-403420 (Annex Number Two)		2/3/2023	Non-Reimbursable	\$1,463,871	ARC	SAA2-403420-2

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
121	31447	Founder Institute, Incorporated	Nonreimbursable Space Act Umbrella Agreement between the National Aeronautics and Space Administration Ames Research Center and Founder Institute, Incorporated for the Fostering of Space Entrepreneurship	11/19/2019	11/19/2022	Non-Reimbursable	\$0	ARC	SAA2-403517
122	31359	Northrop Grumman Corporation	REIMBURSABLE SPACE ACT UMBRELLA AGREEMENT No.31359/SAA2-403514 BETWEEN NASA ARC AND NORTHROP GRUMMAN CORPORATION FOR WIND TUNNEL TESTING	1/20/2020	1/20/2025	Reimbursable		ARC	SAA2-403514
123	31234	GOOGLE, LLC	Reimbursable Space Act Agreement between NASA ARC and Google for Calibration and Noise Characterization Approaches for Quantum Processors	3/30/2020	3/29/2022	Reimbursable		ARC	SAA2-403512
124	31044	NTT Research, Inc.	Reimbursable Space Act Agreement between the National Aeronautics and Space Administration Ames Research Center and NTT Research, Inc. to Benchmark Coherent Ising Machines		11/12/2024	Reimbursable		ARC	SAA2-403506
125	30884	San Francisco International Airport	Reimbursable Umbrella Space Act Agreement between The National Aeronautics and Space Administration Ames Research Center and San Francisco International Airport City and County of San Francisco for Research and Technologies for Increasing Airport Surface Capacity and Airfield Efficiency.		7/2/2024	Reimbursable		ARC	SAA2-403426

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
126	30834	Advanced Technologies Group, Inc.	Reimbursable Umbrella Space Act Agreement between NASA ARC and Advanced Technologies Group, Inc. for Wind Tunnel Testing	12/20/2024	Reimbursable		ARC	SAA2-403500
127	30730	UNIVERSITY OF WASHINGTON	Annex between the National Aeronautics and Space Administration Ames Research Center and the University of Washington Under Space Act Umbrella Agreement Number 30729, SAA2-403496 (Annex Number One)	8/27/2022	Reimbursable		ARC	SAA2-403496-1
128	30729	UNIVERSITY OF WASHINGTON	Reimbursable Space Act Umbrella Agreement between the National Aeronautics and Space Administration Ames Research Center and the University of Washington for Hardware Development and Testing	8/27/2024	Reimbursable		ARC	SAA2-403496
129	30601	SAN JOSE STATE UNIVERSITY	Annex One to Nonreimbursable Umbrella Space Act Agreement between the National Aeronautics and Space Administration Ames Research Center and San Jose State University to Facilitate Development of Nano- Satellite Sub-Systems and Sensors	6/20/2022	Non-Reimbursable	\$19,719	ARC	SAA2-403280 -1
130	30598	SAN JOSE STATE UNIVERSITY	Nonreimbursable Umbrella Space Act Agreement between the National Aeronautics and Space Administration Ames Research Center and San Jose State University for TechEdSat N Academia Infusion 6/20/2019	6/20/2022	Non-Reimbursable	\$0	ARC	SAA2-403280

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131	30453	Leland Stanford Junior University	Annex One under Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Leland Stanford Junior University for Aerospace Technology Research, Testing, and Development	12/16/2021	Reimbursable		ARC	SAA2-403497-1
132	30452	Leland Stanford Junior University	Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Leland Stanford Junior University for Aerospace Technology Research, Testing, and Development	12/16/2025	Reimbursable		ARC	SAA2-403497
133	30437	Rockwell Collins, Inc	Nonreimbursable Space Act Agreement between the National Aeronautics and Space Administration Ames Research Center and Rockwell Collins, Inc. for Human-Autonomy Teaming Research	8/26/2023	Non-Reimbursable	\$450,224	ARC	SAA2-403491
134	30244	GE Flight Efficiency Services, Inc.	Non-Reimbursable Space Act Umbrella Agreement Between the National Aeronautics and Space Administration Ames Research Center and GE Flight Efficiency Services, Inc. for Collaborative Development and Use of NASA ATM-X Testbed for Integrated ATM Research	9/12/2024	Non-Reimbursable	\$0	ARC	SAA2-403486
135	30167	Airxos	Non-Reimbursable Space Act Agreement Between Airxos and NASA Ames for Unmanned Aircraft Systems Traffic Management. 4/5/2019	4/5/2022	Non-Reimbursable	\$24,585	ARC	SAA2-403422

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136	30078	Iowa State University	Non-Reimbursable Space Act Agreement Between NASA Ames and Iowa State University (ISU) for Unmanned Aircraft Systems Traffic Management (UTM)	3/28/2019	3/28/2022	Non-Reimbursable	\$24,585	ARC	SAA2-403449
137	29967	American Space Industries, Inc.	Reimbursable Space Act Agreement Between NASA Ames and American Space Industries Inc (ASI) for Engineering Consultation On Sierra-2 Unmanned Aircraft System	3/2/2019	3/2/2022	Reimbursable		ARC	SAA2-403421
138	29856	Texas A&M Engineering Experiment Station	Non-Reimbursable Space Act Agreement Between NASA Ames and Texas AM Engineering Experiment Station for Investigating Additive Manufacturing of Thermal Protection Material	2/20/2019	2/20/2022	Non-Reimbursable	\$32,675	ARC	SAA2-403455
139	29462	Voltex Technology, Inc.	Reimbursable Space Act Agreement between the National Aeronautics and Space Administration Ames Research center and Voltex Technology to Explore New Production Methods for Sensor Arrays	7/31/2019	1/31/2022	Reimbursable		ARC	SAA2-403466
140	29380	The Boeing Company	Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and the Boeing Company for Wind Tunnel Testing	4/27/2020	4/27/2025	Reimbursable		ARC	SAA2-403460

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141	1,000,0	SOUTHWEST AIRLINES COMPANY	Non-Reimbursable Space Act Agreement between NASA Ames Research Center and Southwest Airlines for Development and Evaluation of an Air Traffic Management System	7/12/2019	1/12/2022	Non-Reimbursable	\$225,914	ARC	SAA2-403448
142	28737	Raytheon Company	Non-Reimbursable Space Act Agreement Between Raytheon Company and NASA Ames for Unmanned Aircraft Systems Traffic Management	8/1/2018	8/1/2021	Non-Reimbursable	\$17,746	ARC	SAA2-403436
143	28735	UASidekick	Non-Reimbursable Space Act Agreement Between UASidekick and the National Aeronautics and Space Administration Ames Research Center for Unmanned Aircraft Systems Traffic Management	11/19/2018	11/19/2021	Non-Reimbursable	\$17,565	ARC	SAA2-403453
144	28415	Planetary Ventures, LLC	Temporary Construction License between NASA Ames and Planetary Ventures, LLC-Navigational Aids Infrastructure	5/24/2018	12/31/9999	Reimbursable		ARC	SAA2-403414
145	28264	UNIVERSITY OF CINCINNATI	Annex Three to the Nonreimbursable Umbrella Space Act Agreement between the University of Cincinnati and The National Aeronautics And Space Administration, Ames Research Center for Providing Educational Opportunities to Students to Evaluate Technology Transfer Opportunities	11/1/2018	11/1/2023	Non-Reimbursable	\$118,116	ARC	SAA2-402808-3

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146	27956	Stratolaunch Federal Inc	Annex Five to the Reimbursable Umbrella Space Act Agreement between the National Aeronautics and Space Administration Ames Research Center and Stratolaunch Federal, Inc. for Entry System Analysis	4/5/2018	12/6/2021	Reimbursable		ARC	SAA2-403221-5
147	27940	Stratolaunch Systems Corporation	Annex 4 for Reimbursable Umbrella Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and Stratolaunch Federal Inc. for Supporting the Analysis of Statolaunchs Launch Architecture	4/5/2018	12/6/2021	Reimbursable		ARC	SAA2-403221-4
148	27918	Stratolaunch Federal Inc	Annex Three to the Reimbursable Umbrella Space Act Agreement between the National Aeronautics and Space Administration Ames Research Center and Stratolaunch Federal, Inc. for Entry Systems Analysis	4/5/2018	12/6/2021	Reimbursable		ARC	SAA2-403221-3
149	27890	Uber Technologies Inc	Annex One to the Non-Reimbursable Umbrella Space Act Agreement Between the National Aeronautics and Space Administration Ames Research Center and Uber Technologies Inc for Initial Modeling and Simulations of Urban Air Mobility Operations for Airspace Access and Scalability	5/4/2018	1/4/2022	Non-Reimbursable	\$604,820	ARC	SAA2-403420-1
150	27889	Uber Technologies Inc	Non-Reimbursable Umbrella Between the National Aeronautics and Space Administration Ames Research Center and Uber Technologies Inc for Research, Development, Testing and Evaluation of an Urban Air Mobility (UAM) System	5/4/2018	1/4/2022	Non-Reimbursable	\$0	ARC	SAA2-403420

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151	1//X//	Space Exploration Technologies Corp.	Reimbursable Umbrella Space Act Agreement Between the National Aeronautics and Space Administration Ames Research Center and Space Exploration Technologies Corp to Support SpaceX Commercial Space Transportation Development		6/6/2023	Reimbursable		ARC	SAA2-403419
152	27787	GOOGLE, LLC	Non-Reimbursable Space Act Agreement Between the National Aeronautics and Space Administration Ames Research Center and Google LLC to Analyze the Utilization and Assessment of Googles Emerging Quantum Processors	7/3/2018	7/3/2023	Non-Reimbursable	\$680,962	ARC	SAA2-403407
153	27617	Blue Origin, LLC	Annex One to the Reimbursable Umbrella Space Act Agreement Between the National Aeronautics and Space Administration Ames Research Center and Blue Origin, LLC for Thermal Protection System Material Design Support for Blue Origin	7/13/2018	7/13/2023	Reimbursable		ARC	SAA2-403403-1
154	27616	Blue Origin, LLC	Reimbursable Umbrella Space Act Agreement Between the National Aeronautics and Space Administration Ames Research Center and Blue Origin, LLC to Support Blue Origin Commercial Space Transportation Development	7/13/2018	7/13/2023	Reimbursable		ARC	SAA2-403403
155	27441	Agusta Westland Philadelphia Corporation	Reimbursable Umbrella Space Act Agreement Between the National Aeronautics and Space Administration Ames Research Center and Agusta Westland Philadelphia Corporation for Wind Tunnel Testing	1/29/2018	1/29/2023	Reimbursable		ARC	SAA2-403286

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156	26743	INTEL CORP	Non-Reimbursable Space Act Agreement between the National Aeronautics and Space Administration Ames Research Center and Intel Corporation for Collaboration to Evaluate NASA's Computational Performance		9/19/2022	Non-Reimbursable	\$106,091	ARC	SAA2-403249
157	26364	Walmart Stores, Inc	Nonreimbursable Space Act Agreement between Walmart Stores, Inc and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	7/31/2017	7/31/2022	Non-Reimbursable	\$102,925	ARC	SAA2-403248
158	26363	The Boeing Company	Nonreimbursable Space Act Agreement between The Boeing Company and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	7/31/2017	7/31/2022	Non-Reimbursable	\$102,925	ARC	SAA2-403229
159	26361	YORK AND NEW JERSEY	Nonreimbursable Umbrella Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and Port Authority of New York and New Jersey for Capacity Improvement and Delay Reduction in the New York Metroplex	7/31/2017	7/31/2022	Non-Reimbursable	\$0	ARC	SAA2-403156
160	26320	Northeast UAS Airspace Integration Research Alliance, Inc.	Reimbursable Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and Northeast UAS Airspace Integration Research Alliance, Inc. for National UAS Standardized Testing and Rating System (NUSTAR)		7/31/2022	Reimbursable		ARC	SAA2-403197

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161	26319	Northeast UAS Airspace Integration Research Alliance, Inc.	Nonreimbursable Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and Northeast UAS Airspace Integration Research Alliance, Inc. for UAS Traffic Management		7/31/2022	Non-Reimbursable	\$102,925	ARC	SAA2-403196
162	26114	Botlink, LLC	Nonreimbursable Space Act Agreement between Botlink, LLC and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	5/13/2017	5/13/2022	Non-Reimbursable	\$102,925	ARC	SAA2-403261
163	26113	Carbon Autonomous Systems LLC	Nonreimbursable Space Act Agreement between Carbon Autonomous Systems LLC and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	5/10/2017	5/10/2022	Non-Reimbursable	\$1,000	ARC	SAA2-403257
164	26112	Skyskopes	Nonreimbursable Space Act Agreement between Skyskopes and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	5/10/2017	5/10/2022	Non-Reimbursable	\$102,925	ARC	SAA2-403259
165	26110	Drone America	Nonreimbursable Space Act Agreement between Drone America and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	5/11/2017	5/11/2022	Non-Reimbursable	\$1,000	ARC	SAA2-403253

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166	26108	ISight RPV Services	Nonreimbursable Space Act Agreement between ISight RPV Services and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	5/11/2017	5/11/2022	Non-Reimbursable	\$102,925	ARC	SAA2-403265
167	25922	Unmanned Applications Institute International	Nonreimbursable Space Act Agreement between Unmanned Applications Institute International and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	5/11/2017	5/11/2022	Non-Reimbursable	\$102,925	ARC	SAA2-403260
168	25787	The General Electric Company	Reimbursable Space Act Agreement between the National Aeronautics and Space Administration Ames Research Center and the General Electric Company for General Electric Aviation Use of of NASA's B747 Flight Simulator Located at the Crew Vehicle Systems Research Facility (CVSRF) at ARC		5/17/2022	Reimbursable		ARC	SAA2-403256
169	1755/8	General Atomics Aeronautical Systems Inc.	Reimbursable Umbrella Space Act Agreement between the National Aeronautics and Space Administration Ames Research Center and General Atomics Aeronautical Systems Inc. for Wind Tunnel Testing	4/20/2017	4/20/2022	Reimbursable		ARC	SAA2-403246
170	25495	Sapphire Innovation Solutions, Inc.	Nonreimbursable Space Act Agreement between Sapphire Innovation Solutions, Inc. and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	4/3/2017	4/3/2022	Non-Reimbursable	\$1,000	ARC	SAA2-403251

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171	25494	Flyspan Systems, Inc.	Nonreimbursable Space Act Agreement between Flyspan Systems, Inc. and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	4/3/2017	4/3/2022	Non-Reimbursable	\$1,000	ARC	SAA2-403250
172	25213	Rigetti Computing	Nonreimbursable Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and Rigetti Computing to Asses a Gate-Based Quantum Computing Processor for Meeting Complex Computing Challenges		2/28/2022	Non-Reimbursable	\$129,036	ARC	SAA2-403167
173	25069	IAI North America	Nonreimbursable Space Act Agreement between IAI North America and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	2/3/2017	2/3/2022	Non-Reimbursable	\$100,162	ARC	SAA2-403233
174	25006	GoPro, Inc.	Nonreimbursable Space Act Agreement between GoPro, Inc. and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	1/26/2017	1/26/2022	Non-Reimbursable	\$100,162	ARC	SAA2-403190
175	24991	Uber Technologies, Inc.	Nonreimbursable Space Act Agreement between Uber Technologies, Inc. and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aircraft Systems Traffic Management	1/26/2017	1/26/2022	Non-Reimbursable	\$100,162	ARC	SAA2-403231

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176	24921	H211, LLC	Nonreimbursable Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and H211, LLC for Earth Observations in Support of Air Pollution and Climate Change Research	1/17/2017	1/17/2022	Non-Reimbursable	\$1,243,691	ARC	SAA2-403236
177	24749	STRATOLAUNCH SYSTEMS CORP	Annex One to the Reimbursable Umbrella Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and Stratolaunch Systems Corporation for Supporting the Analysis of Statolaunch's Launch Architecture	12/6/2016	12/6/2021	Reimbursable		ARC	SAA2-403221-1
178	24748	Stratolaunch Systems Corporation	Reimbursable Umbrella Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and Stratolaunch Systems Corporation for Supporting the Analysis of Statolaunch's Launch Architecture	12/6/2016	12/6/2021	Reimbursable		ARC	SAA2-403221
179	24643	AT&T Government Solutions	Annex One to the Nonreimbursable Umbrella Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and AT&T Government Solutions for Unmanned Aerial Systems Traffic Management	10/26/2016	10/26/2021	Non-Reimbursable	\$22,039	ARC	SAA2-403109-1
180	24548	AT&T Government Solutions	Nonreimbursable Umbrella Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and AT&T Government Solutions for Unmanned Aerial Systems Traffic Management	10/26/2016	10/26/2021	Non-Reimbursable	\$0	ARC	SAA2-403109

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181	24366	The City of Charlotte	Non-Reimbursable Space Act Agreement with the City of Charlotte, Charlotte Douglas International Airport for Laboratory Space and Data Sharing	10/5/2016	10/5/2021	Non-Reimbursable	\$7,500	ARC	SAA2-403163
182	24256	Rockwell Collins	Nonreimbursable Space Act Agreement between Rockwell Collins and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aerial Systems Traffic Management		9/22/2021	Non-Reimbursable	\$21,771	ARC	SAA2-403148
183	23533	The Board of Trustees of the Leland Stanford Junior University	Nonreimbursable Space Act Agreement between The Board of Trustees of the Leland Stanford Junior University and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aerial Systems Traffic Management	7/5/2016	7/5/2021	Non-Reimbursable	\$21,771	ARC	SAA2-403144
184	23532	Sensurion Aerospace	Nonreimbursable Space Act Agreement between Sensurion Aerospace and the National Aeronautics and Space Administration, Ames Research Center for Unmanned Aerial Systems Traffic Management	7/5/2016	7/5/2021	Non-Reimbursable	\$100,162	ARC	SAA2-403113
185	177767	Dallas/Fort Worth International Airport Board	Nonreimbursable Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and Dallas/Fort Worth International Airport Board for Data Sharing for Nextgen Research and Development	2/20/2016	9/29/2021	Non-Reimbursable	\$41,400	ARC	SAA2-402972

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186	22051	American Airlines, Inc.	Nonreimbursable Space Act Agreement between the National Aeronautics and Space Administration, Ames Research Center and American Airlines, Inc. for Human Factors Fatigue Research	1/5/2016	10/5/2021	Non-Reimbursable	\$653,994	ARC	SAA2-403013
187	18643	National Center for Atmospheric Research	Memorandum of Agreement with University Corporation for Atmospheric Research Acting on Behalf of National Center for Atmospheric Research (NCAR) and NASA Ames Research Center for Meteorological Product Support for Next-Generation Air Transportation System (NGATS)	8/15/2006	8/15/2021	Non-Reimbursable		ARC	SAA2-402003
188	17091	CITY OF SUNNYVALE	Lease Agreement - Sunnyvale Golf Course	5/24/2002	5/24/2022	Reimbursable		ARC	SAA2-401308
189	16543	UNIVERSITY OF CINCINNATI	Nonreimbursable Umbrella Space Act Agreement between University of Cincinnati and The National Aeronautics And Space Administration, Ames Research Center for Space Exploration, Science and Engineering Research, and Stem Initiatives		11/6/2023	Non-Reimbursable		ARC	SAA2-402808
190	15238	US Airways, Inc.	Nonreimbursable Space Act Agreement Between US Airways Inc. and The National Aeronautics And Space Administration, Ames Research Center for Development of Airline Ramp Management Decision Support Tool		9/23/2022	Non-Reimbursable		ARC	SAA2-402733

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191 10780	Palo Alto Humane Society	Nonreimbursable Space Act Agreement between Palo Alto Humane Society and NASA Ames Research Center for Ames Feral Cat Management	9/22/2011	9/22/2021	Non-Reimbursable		ARC	SAA2-402649
192 10122	Lockheed Martin Aeronautics	Reimbursable Umbrella Space Act Agreement between Lockheed Martin Aeronautics Company and NASA Ames Research Center for Wind Tunnel Testing	7/12/2011	7/12/2021	Reimbursable		ARC	SAA2-402632
193 9725	Southwest Airlines Company	Nonreimbursable Space Act Agreement between Southwest Airlines Company and NASA Ames Research Center for Automated Analysis of Diverse Aviation Data		9/2/2021	Non-Reimbursable		ARC	SAA2-402534
194 4900	AMES CHILD CARE CENTER	Nonreimbursable Space Act Agreement Between NASA Ames Research Center and Ames Child Care Center for Administration of On-Site Child Care Facility	5/19/2005	9/30/2021	Non-Reimbursable		ARC	SAA2-401816
195 34557	SPACE EXPLORATION TECHNOLOGIES CORP	Starlink Modal Testing	5/21/2021	5/21/2022	Reimbursable		GRC	SAA3-1691

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
196	34317	UNIVERSITY OF NOTRE DAME	Collaborative Research for Fan Noise Generation and Propagation on Advanced Noise Control Fan (ANCF)	5/26/2021	5/26/2026	Non-Reimbursable	\$80,095	GRC	SAA3-1688
197	33997	The SMART Tire Company, LLC	Shape Memory Alloy Modeling and Development with Smart Tire Company	4/11/2021	4/11/2023	Reimbursable		GRC	SAA3-1679
198	33936	JumpStart, Inc.	Commercialization of NASA GRC Technology Efforts with JumpStart, Inc.	4/1/2021	4/1/2026	Non-Reimbursable	\$43,342	GRC	SAA3-1678
199	33919	Greater Cleveland Partnership	COMPASS Study for Wi-Fi Communications Assessment (Greater Cleveland Partnership)	2/4/2021	2/4/2022	Non-Reimbursable	\$95,405	GRC	SAA3-1677
200		Space Exploration Technologies Corporation	Rideshare Dispenser Modal Test	2/8/2021	2/8/2022	Reimbursable		GRC	SAA3-1676

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
201	33599	Acree Technologies, Inc.	High Temperature Sensors for Advanced Combustion Turbine Applications for Acree Technologies	4/30/2021	4/30/2022	Reimbursable		GRC	SAA3-1674
202	33534	The Ohio State University	In-Situ 3-D Printing of Wireless Implant with The Ohio State University	12/2/2020	12/2/2022	Non-Reimbursable	\$31,189	GRC	SAA3-1670
203	33465	Emerson Climate Technologies, Inc.	Gas Bearing Subject Matter Expertise for Emerson, USA	3/8/2021	3/8/2022	Non-Reimbursable	\$5,697	GRC	SAA3-1671
204	33443	ZIN TECHNOLOGIES, INC	Annex No. 03 to SAA3-1662 for Use of Thermal Vacuum Lab (TVAC) with ZIN (Reimbursable)	12/10/2020	12/10/2023	Reimbursable		GRC	SAA3-1662-03
205	33050	Amazon.Com Services, LLC.	Annex No. 1 under SAA3-1663 Electric Propulsion Thruster Characterization for Amazon.Com	1/5/2021	1/5/2022	Reimbursable		GRC	SAA3-1663-01

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
206	33049		Spacecraft Electric Propulsion Component Development, Manufacturing, Testing and Evaluation	1/5/2021	1/5/2026	Reimbursable		GRC	SAA3-1663
207	33024	CesiumAstro, Inc.	SmallSat Ka-band Operations User Terminal (SKOUT) Flight Experiments with CesiumAstro		12/2/2025	Non-Reimbursable	\$150,568	GRC	SAA3-1664
208	32831	Ozark Integrated Circuits Inc.	Fabrication of SiC Integrated Circuits for a Multi-Chip Microprocessor for Extreme Environments	11/2/2020	11/2/2023	Reimbursable		GRC	SAA3-1661
209	32535	ZIN TECHNOLOGIES, INC	Use of Unique NASA Facilities: Electromagnetic Interference Laboratory (EMI Lab) DreamChaser Task	8/12/2020	8/12/2023	Reimbursable		GRC	SAA3-1662-1
210	32534		Use of Unique NASA Facilities (EMI Lab, SDL, TVAC)	8/11/2020	8/11/2025	Reimbursable		GRC	SAA3-1662

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
211	32526	Emergency Products and Research, Inc.	COVID-19: Technical Expertise and Test Data Analysis for Emergency Products and Research, Inc.	4/24/2020	4/24/2022	Non-Reimbursable	\$52,368	GRC	SAA3-1654
212	32398	University Hospitals of Cleveland	COVID-19 Sterilization of Personal Protective Equipment	4/2/2020	4/2/2022	Non-Reimbursable	\$81,654	GRC	SAA3-1653
213		CASE WESTERN RESERVE UNIVERSITY	A Systematic Data-Analytics Approach to the Design of Interface-Rich Materials	4/15/2021	4/15/2023	Non-Reimbursable	\$21,455	GRC	SAA3-1681
214	32178		High Temperature Testing of Additive Heat Pipes	11/2/2020	11/2/2021	Non-Reimbursable	\$7,367	GRC	SAA3-1659
215	32160	Aerojet Rocketdyne, Inc.	Annex No. 2 under SAA3-1639 to Upper Stage Engine Manufacturing, Testing, and Evaluation Umbrella Agreement for Aerojet Rockeydyne, Inc.	10/16/2020	10/16/2021	Reimbursable		GRC	SAA3-1639-2

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
216		HONEYWELL INTERNATIONAL, INC	Honeywell CLEEN-II Testing in Glenn Advanced Subsonic Combustion Rig (ASCR)	12/2/2020	12/2/2025	Reimbursable		GRC	SAA3-1675
217	31980	BLUE ORIGIN, LLC	Demonstration of Pre-Environmental Testing of Fairing Components at Plum Brook Station Space Environments Complex (SEC)	8/7/2020	8/7/2022	Reimbursable		GRC	SAA3-1609-2
218	31604	Epic Aircraft , LLC	Ice Protection System Development Activities for Epic Aircraft	3/2/2020	3/2/2022	Reimbursable		GRC	SAA3-1650
219	31589	Southwest Research Institute	Great Horned Owl Demonstration and Validation Program with Southwest Research Institute	5/13/2020	5/13/2023	Non-Reimbursable	\$21,468	GRC	SAA3-1658
220	31584	The Charles Stark Draper Laboratory, Inc.	Collaborative Development of High Temperature SiC Electronics for The Charles Stark Draper Laboratory, Inc.	1/15/2020	1/15/2022	Reimbursable		GRC	SAA3-1646

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE		CENTER TRACKING NUMBER (IF ANY)
221 31550		Farmer Lease for Agricultural Purpose Parcel K	4/15/2019	4/14/2024	Reimbursable		GRC	PBS2019SS004
222 31546		Farmer Lease for Agricultural Purposes Parcel M	4/15/2019	4/14/2024	Reimbursable		GRC	PBS2019RF005
223 31544		Farmer Lease for Agricultural Purposes Parcel C	4/15/2019	4/14/2024	Reimbursable		GRC	PBS2019KF001
224 31542		Farmer Lease for Agricultural Purposes Parcel J	4/15/2019	4/14/2024	Reimbursable		GRC	PBS2019DM003
225 31540	DMS Farms, Ltd	Farmer Lease for Agricultural Purposes Parcel G	4/15/2019	4/14/2024	Reimbursable		GRC	PBS2019DM002

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE		CENTER TRACKING NUMBER (IF ANY)
226 31423	UNIVERSITY OF PITTSBURGH	Calculation of EBC thermodynamics properties from machine learning-derived atomistic potentials	10/26/2020	10/26/2021	Non-Reimbursable	\$12,144	GRC	SAA3-1668
227 31407	OHIO DEPARTMENT OF NATURAL RESOURCES	A Series of Public Deer Hunts at Plum Brook Station	11/15/2019	11/15/2024	Non-Reimbursable	\$167,603	GRC	SAA3-1632
228 31374	GE Research	COLLABORATIVE DEVELOPMENT OF FINITE ELEMENT HPC MULTISCALE MODELING FRAMEWORK	4/30/2020	4/30/2024	Non-Reimbursable	\$157,736	GRC	SAA3-1656
229 31344	GREAT LAKES SCIENCE CENTER	The Official NASA Glenn Visitor Center	9/30/2019	9/30/2029	Non-Reimbursable	\$0	GRC	SAA3-1630
230 31247		Technical Expertise Space Act Agreement for Terves, LLC.	12/10/2019	12/10/2021	Non-Reimbursable	\$7,099	GRC	SAA3-1643

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	I 'ENIED	CENTER TRACKING NUMBER (IF ANY)
231 31246		Technical Expertise Space Act Agreement for Applied Sciences	11/6/2019	11/6/2021	Non-Reimbursable	\$6,960	GRC	SAA3-1638
232 31245		Technical Expertise Space Act Agreement for SafeLi Materials	10/29/2019	10/29/2021	Non-Reimbursable	\$6,910	GRC	SAA3-1635
233 31132	Acme Express, Inc.	Technical Expertise Space Act Agreement for Acme Express, Inc.	10/19/2019	10/19/2021	Non-Reimbursable	\$7,122	GRC	SAA3-1633
234 31055	Launchspace Technologies Corporation	Aerogel Material for Orbital Debris Capture	4/30/2020	4/30/2022	Reimbursable		GRC	SAA3-1655
235 30756	Aerojet Rocketdyne, Inc.	Upper Stage Engine Manufacturing, Testing, and Evaluation Umbrella Agreement for Aerojet Rockeydyne, Inc.	11/18/2019	11/18/2024	Reimbursable		GRC	SAA3-1639

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
236	30422	Innoveering, LLC	High-Speed Inlet Testing in NASA's ERB- 1NW Wind Tunnel	10/29/2019	8/29/2021	Reimbursable		GRC	SAA3-1636
237	30392	Rocky River Watershed Council	Restoring Lower Abram Creek at NASA Glenn Research Center	6/24/2019	6/24/2024	Non-Reimbursable	\$3,302	GRC	SAA3-1615
238	30296	ANSYS Inc.	Collaboration on Icing Simulation Software Development	1/27/2020	1/27/2024	Non-Reimbursable	\$114,343	GRC	SAA3-1647
239	30295	THE BOEING COMPANY	Collaborative Icing Research, Simulation Tool Development and Testing Opportunities	3/12/2020	3/12/2023	Non-Reimbursable	\$59,152	GRC	SAA3-1652
240	30288	HONEYWELL INTERNATIONAL, INC	LPT (Low Pressure Turbine) rig testing	12/18/2020	12/18/2024	Non-Reimbursable	\$1,105,621	GRC	SAA3-1644

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
241	30155	United Technologies Corporation	HEATheR Thermal Management Systems Modeling	1/13/2020	1/13/2022	Non-Reimbursable	\$8,655	GRC	SAA3-1645
242		CEDAR POINT AMUSEMENT PARK	Math and Science Week Events at Cedar Point Amusement Park	5/20/2019	5/20/2022	Non-Reimbursable	\$66,429	GRC	SAA3-1611
243		GENERAL ATOMICS AERONAUTICAL SYSTEMS, INC.	Ice Shape Investigations for General Atomics	5/13/2019	5/13/2022	Reimbursable		GRC	SAA3-1607
244	29566	A&P Technology, Inc.	Dynamic Energy Absorption in Braided Composite Materials with A and P Technology, Inc.	6/11/2019	6/1/2024	Non-Reimbursable	\$276,623	GRC	SAA3-1612
245	29559	LOCKHEED MARTIN	Combined-Cycle Engine Large-scale Inlet Mode Transition (CCE-LIMX) CFD Studies	4/2/2019	4/2/2022	Non-Reimbursable	\$17,080	GRC	SAA3-1601

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	I V P P C I P A C I P P P M P M I	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
246	29551	SureFly, Inc.	Acoustic Measurements on electrified Vertical Take-Off and Landing Urban Air Mobility Vehicle with SureFly, Inc.	8/16/2019	8/16/2024	Non-Reimbursable	\$354,701	GRC	SAA3-1597
247		Orleans Niagara Board of Cooperative Educational Services	High School Students United with NASA to Create Hardware (HUNCH)	7/14/2017	7/14/2022	Non-Reimbursable	\$149,717	GRC	SAA3-1520
248	28854	California Institute of Technology	Failure Analysis of Modified Environmental Barrier Coatings (EBC)	3/6/2019	3/6/2022	Non-Reimbursable	\$14,614	GRC	SAA3-1599
249	28821	Ozark Integrated Circuits, Inc.	Testing of Extreme High Temperature Capable SiC Integrated Circuits for Geothermal Systems for OZARK, Inc.	10/22/2018	10/22/2021	Reimbursable		GRC	SAA3-1581
250	28651	UNIVERSITY OF CINCINNATI	HABSat-2 – Harmful Algal Bloom Satellite 2 with the University of Cincinnati	6/11/2019	12/31/2023	Non-Reimbursable	\$74,976	GRC	SAA3-1613

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
251	28638	GENERAL ELECTRIC COMPANY	Electrified Aircraft Propulsion (EAP) Powertrain Component Testing	9/14/2018	2/28/2022	Non-Reimbursable	\$1,963,492	GRC	SAA3-1573
252	28235	Textron Aviation, Inc.	Ice Protection System Development Activities for Textron Aviation	2/27/2019	2/27/2022	Reimbursable		GRC	SAA3-1598
253	28214	ROLLS-ROYCE CORP	Silicon Carbide Fiber High Temperature Characterization	1/14/2020	1/14/2024	Reimbursable		GRC	SAA3-1606-1
254	28213	ROLLS-ROYCE CORP	Testing and Analysis of Advanced Turbine Engine Materials, Structures and Components	1/14/2020	1/14/2025	Reimbursable		GRC	SAA3-1606
255	28172	BLUE ORIGIN, LLC	Environmental Testing for Fairing Deployment at Plum Brook Station	5/20/2019	5/20/2024	Reimbursable		GRC	SAA3-1609-1

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256	28171	BLUE ORIGIN, LLC	Environmental Testing at Plum Brook Station	5/20/2019	5/20/2024	Reimbursable		GRC	SAA3-1609
257	28028	The Boeing Company	High Ice Water Content Radar II Flight Campaign Support	5/13/2019	5/13/2022	Non-Reimbursable	\$17,750	GRC	SAA3-1608
258	27738	GENERAL ELECTRIC COMPANY	GE Aviation Low Pressure Ratio Fan and Inlet Technology Test	6/26/2019	6/26/2022	Reimbursable		GRC	SAA3-1587
259	27606	THE BOEING COMPANY	Shape Memory Alloy Reconfigurable Technology - Vortex Generator (SMART-VG) with The Boeing Company	12/6/2018	12/6/2021	Non-Reimbursable	\$184,268	GRC	SAA3-1589
260	27430	WOODWARD FST, INC	Fundamental Testing of Advanced SV-LDI Low-Emissions Fuel-Air Mixers	10/22/2018	10/22/2021	Non-Reimbursable	\$287,914	GRC	SAA3-1580

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261	27174	GENERAL ELECTRIC COMPANY	GE Low Pressure Ratio Fan Test	3/28/2019	3/28/2024	Non-Reimbursable	\$5,452,479	GRC	SAA3-1588
262	26982	Kettering City Schools	NASA HUNCH (High school students United with NASA to Create Hardware)	3/14/2018	3/14/2023	Non-Reimbursable	\$97,136	GRC	SAA3-1545
263	26825	ASM INTERNATIONAL	Material Data Management Consortium with ASM International	3/27/2018	3/27/2022	Reimbursable		GRC	SAA3-1550
264	26750	The University of Tulsa	Cognitive Multiple User Free Space Optical Link Study - TU	1/7/2018	1/7/2022	Non-Reimbursable	\$17,702	GRC	SAA3-1532
265	26450	Genesee Valley Educational Partnership	NASA HUNCH (High school students United with NASA to Create Hardware)	5/6/2018	5/6/2023	Non-Reimbursable	\$97,136	GRC	SAA3-1564

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266	26343	J.I. Case High School	NASA HUNCH (High school students United with NASA to Create Hardware)	3/14/2018	3/14/2023	Non-Reimbursable	\$91,486	GRC	SAA3-1547
267	26342	North Ridgeville High School	NASA HUNCH (High school students United with NASA to Create Hardware)	3/27/2018	3/27/2023	Non-Reimbursable	\$97,136	GRC	SAA3-1554
268	26341	PLATTEVILLE HIGH SCHOOL	NASA HUNCH (High school students United with NASA to Create Hardware)	4/22/2018	4/22/2023	Non-Reimbursable	\$92,620	GRC	SAA3-1560
269			NASA HUNCH (High school students United with NASA to Create Hardware)	3/27/2018	3/27/2023	Non-Reimbursable	\$91,486	GRC	SAA3-1553
270	25470	LOCKHEED MARTIN	Annex No. 08 under SAA2-402632 for Demonstration of a Nozzle Concept in NASA GRC Aero-Acoustic Propulsion Laboratory (AAPL) Facility	8/23/2017	7/12/2021	Reimbursable		GRC	SAA2-402632-8

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
271	25289	East Troy Community School District	NASA HUNCH (High school students United with NASA to Create Hardware)	3/14/2018	3/14/2023	Non-Reimbursable	\$92,620	GRC	SAA3-1546
272	24838	Global Energy Corporation	Development and Testing of a High Power Space Generator	1/7/2018	1/7/2023	Reimbursable		GRC	SAA3-1529
273	24459	ZIN TECHNOLOGIES, INC	Use of Unique NASA Facilities (EMI Lab, TSC, 1K Clean room)	3/5/2018	3/5/2023	Reimbursable		GRC	SAA3-1539
274	23602	Lorain County Community College	NASA GRC and LCCC Kiosk Pilot Project	9/19/2016	9/19/2021	Non-Reimbursable	\$14,442	GRC	SAA3-1481
275	23430	American Technical Coatings, Inc.	Ballistic Radome Development	5/11/2017	9/30/2021	Reimbursable		GRC	SAA3-1513

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
276 23054	University of Notre Dame	Collaborative Research Activities Using the Advanced Noise Control Fan (ANCF) Test Rig for Science, Technology, Engineering and Math (STEM) Education	8/9/2016	8/9/2021	Non-Reimbursable	\$237,087	GRC	SAA3-1482
277 22817	Pennsylvania State University Applied Research Laboratory	High-Speed Gear Studies	11/29/2016	11/29/2021	Non-Reimbursable	\$431,929	GRC	SAA3-1495
278 22356	Orbital Sciences Corporation	NASA Research Announcement: NNH15ZOA001N: Public Private Partnership for Robotic In-Space Manufacturing and Assembly of Spacecraft and Space Structures	10/3/2016	10/3/2021	Non-Reimbursable	\$131,737	GRC	SAA3-1491
279 21883	United Technology Research Center	High Efficiency Centrifugal Compressor Diffuser Redesign and Test	7/27/2016	7/27/2021	Non-Reimbursable	\$2,907,687	GRC	SAA3-1472
280 21691		STEM Collaboration with Hathaway Brown School	4/25/2016	4/25/2022	Reimbursable		GRC	SAA3-1466

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281	21329	Case Western Reserve University	Development of Real-Time Particulate and Toxic-Gas Sensors for Firefighter Health and Safety	11/20/2015	4/25/2022	Reimbursable		GRC	SAA3-1435
282	20864	Lewis Little Folks, Incorporated	Lewis Little Folks Space Act Agreement	7/11/2017	7/11/2022	Non-Reimbursable	\$493,128	GRC	SAA3-1494
283	20780	Friends of NASA Plum Brook Station, LLC	Plum Brook Station Entry Monument Sign	3/19/2018	3/19/2023	Non-Reimbursable	\$5,452	GRC	SAA3-1544
284	34562		AUGMENTED REALITY AND VIRTUAL REALITY PROGRAM DEVELOPMENT	6/1/2021	6/1/2023	Non-Reimbursable	\$11,200	GSFC	SAA5-21-2-N34562
285	34065		Annex 4 to ULA Umbrella with Annexes for launch vehicle support (Vulcan SNC-1)	6/7/2021	6/7/2026	Reimbursable		GSFC	450-AGMT-0180

ROW PAM ID NO. NUMBE	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
286 34064	· ·	Annex 3 to ULA Umbrella with Annexes for launch vehicle support (Vulcan Peregrine)	6/7/2021	6/7/2026	Reimbursable		GSFC	450-AGMT-0180
287 34061		Annex 2 to ULA Umbrella with Annexes for launch vehicle support (Atlas V CFT)	6/11/2021	6/11/2026	Reimbursable		GSFC	450-AGMT-0180
288 34020		Annex 1 under the ULA Umbrella for launch vehicle support (Atlas V USSF-8)	6/8/2021	6/8/2026	Reimbursable		GSFC	450-AGMT-0180
289 34019		ULA Umbrella with Annexes for launch vehicle support	6/8/2021	6/8/2026	Reimbursable		GSFC	450-AGMT-0180
290 33729	Prince George's County, Maryland	Facilitation of Commercial Utilization of NASA Technologies for Medical Applications	1/19/2021	1/18/2023	Non-Reimbursable	\$23,000	GSFC	SAA5-2021-1-N33729

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291	33525	International High School at Largo	Dissemination of NASA Technologies for Educational Entrepreneurship and Commercialization Studies by Students	4/30/2021	4/30/2024	Non-Reimbursable	\$10,500	GSFC	
292	33419	LightWave Logic Inc.	Collaboration on Ultra-Wide Band (UWB) Antenna-Coupled Electro-Optic Modulator (EOM)	11/16/2020	11/16/2021	Non-Reimbursable	\$165,000	GSFC SAA5-20)-4-N33419
293		Maryland Technology Development Corporation	Economic Development	11/1/2020	11/1/2023	Non-Reimbursable	\$61,400	GSFC SAA5-20	020-33416
294	33369	Federal Business Council	Collaboration on Cybersecurity Awareness	1/27/2021	1/27/2026	Non-Reimbursable	\$25,000	GSFC SAA5-20)-4-N33369
295	33198	CORNELL UNIVERSITY	Cornell University for Collaborative Exploration and Engineering for Thermal Design, Flight Dynamics and Robotic Sample	10/21/2020	10/21/2022	Non-Reimbursable	\$346,000	GSFC	

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296	32951	Telophase Corporation	Transfer of Sensing Technologies for Development of a Prototype Rapid Testing Breathalyzer	1/26/2021	1/26/2023	Non-Reimbursable	\$44,835	GSFC	SAA5-2021-1-A32950
297	32950	Telophase Corporation	Rapid Detection of Changing Bio-signatures from Existing Pathogens or New Virus Profiles	1/15/2021	1/14/2024	Non-Reimbursable	\$0	GSFC	SAA5-2021-1-U32950
298	32893	L.Garde, Inc.	Development Inflatable Communication Antenna Structures using Green Carbon Foams	4/20/2021	4/20/2024	Non-Reimbursable	\$108,100	GSFC	SAA5-20-4-N32893
299	32879		AUGMENTED REALITY AND VIRTUAL REALITY DEVELOPMENT FOR NASA SCIENCE AND ENGINEERING	8/13/2010	8/13/2023	Non-Reimbursable		GSFC	SAA5-20-3-N32879
300	32803	Orbit Fab, Inc	Grapple Fixture Evaluation	3/5/2021	3/4/2022	Non-Reimbursable	\$39,000	GSFC	

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
301	32802	HONEYBEE ROBOTICS, LTD	Grapple Fixture Evaluation	11/15/2020	11/14/2021	Non-Reimbursable	\$39,000	GSFC	
302	32725	University of Texas at Austin	annex to Outreach for Space Operations and Mission Problems	10/15/2020	6/8/2025	Non-Reimbursable	\$26,000	GSFC	SAA5-20-3-N32725-A2
303		Maryland Department of the Environment	Supporting Shellfish Aquaculture in the Chesapeake Bay using Artificial Intelligence to Detect Poor Water Quality through Sampling and Remote Sensing	6/17/2021	6/17/2023	Non-Reimbursable	\$231,000	GSFC	NASA-MDE-32661
304	32654	Altius Space Machines, Inc	Grapple Fixture Evaluation	10/6/2020	10/5/2021	Non-Reimbursable	\$39,000	GSFC	
305	32506	First RF Corporation	Identifying Sensor Parameter with the Use of Simulations	8/14/2020	9/28/2021	Reimbursable		GSFC	NASA-First RF-32506

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
306		THE UNIVERSITY OF NORTH TEXAS	AUGMENTED REALITY AND VIRTUAL REALITY DEVELOPMENT FOR NASA SCIENCE AND ENGINEERING	6/10/2020	6/10/2023	Non-Reimbursable	\$16,800	GSFC	SAA5-20-3-N32490
307	31812	University of Texas at Austin	Outreach for Space Operations and Mission Problems	6/8/2020	6/7/2025	Non-Reimbursable	\$56,859	GSFC	31811
308	31811	University of Texas at Austin	Outreach for Space Operations and Mission Problems	6/8/2020	6/7/2025	Non-Reimbursable	\$0	GSFC	
309	31605	Earth Networks, Inc.	INFORMATION AND DATA EXCHANGE RELATED TO THE GLOBE PROGRAM	4/29/2020	4/29/2025	Non-Reimbursable	\$17,600	GSFC	SAA5-20-2-N31605
310	131501	UNIVERSITY OF MARYLAND COLLEGE PARK	AUGMENTED REALITY AND VIRTUAL REALITY DEVELOPMENT FOR NASA SCIENCE AND ENGINEERING	9/24/2020	9/24/2023	Non-Reimbursable	\$16,800	GSFC	SAA5-20-1-N31591

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
311	31191		ACCESS AND USE OF GSFC ENVIRONMENTAL TEST AND INTEGRATION SYSTEMS AND FACILITIES FOR COMMERCIAL PURPOSES	6/16/2020	6/15/2025	Reimbursable		GSFC	SAA5-19-4-R31191
312	31175	Walgreen Company	NASA GSFC Non-Occupational fee-based influenza clinic	11/12/2019	11/12/2024	Non-Reimbursable	\$420,000	GSFC	
313	1311133	Women's National Basketball Players Association	COLLABORATION ON AWARENESS OF NASA TECHNOLOGIES FOR ENTREPRENEURIAL OPPORTUNITIES	10/3/2019	10/3/2022	Non-Reimbursable	\$112,500	GSFC	SAA5-19-4-N31033
314	30946	NORTHROP GRUMMAN	Fiber Optic Cable Testing Activities	8/18/2020	2/17/2022	Reimbursable		GSFC	SAA5-2020-1-R30946
315		THE JOHNS HOPKINS UNIVERSITY	Fabricating cryogenic detectors for cosmic microwave background instrument	9/18/2019	1/23/2022	Reimbursable		GSFC	SAA5-19-4-R30569

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316	30478	THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK	Development of Teaching Activities	8/29/2019	8/28/2024	Reimbursable		GSFC	CU-NASA-30478
317		Ball Aerospace and Technology Corporation	HIGH ACCURACY, CRYOGENIC, REFRACTIVE INDEX MEASUREMENTS	5/16/2019	10/26/2021	Reimbursable		GSFC	SAA5-2019-2-R29854
318	29833	DIGITALGLOBE, INC	CONJUNCTION ASSESSMENT SCREENING SERVICES	9/11/2019	9/11/2024	Reimbursable		GSFC	SAA5-19-2-R-29833
319	29494	SPACE TELESCOPE SCIENCE INSTITUTE	Loan of Touch Screen System for Display of Science Information	2/13/2019	2/1/2023	Non-Reimbursable	\$2,000	GSFC	29494
320		National Basketball Players Association	COLLABORATION ON AWARENESS OF NASA TECHNOLOGIES FOR ENTREPRENEURIAL OPPORTUNITIES	4/30/2019	4/30/2022	Non-Reimbursable	\$112,600	GSFC	SAA5-19-1-N29201

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321	1.70/111	National Basketball Retired Players Association	COLLABORATION ON AWARENESS OF NASA TECHNOLOGIES FOR ENTREPRENURIAL OPPORTUNITIES	9/14/2018	9/14/2023	Non-Reimbursable	\$112,600	GSFC	SAA5-18-3-N28411
322	25933	INSTITUTE FOR LOCAL INNNOVATIONS, INC	IDENTIFYING AND ESTABLISHING TECHNOLOGY TRANSFER OPPORTUNITIES AND COLLABORATIONS	10/2/2017	10/2/2022	Non-Reimbursable	\$8,700	GSFC	SAA5-17-3-N25933
323	25689	National Football League Players Association	COLLABORATION TO COMMERCIALIZE NASA TECHNOLOGIES	5/15/2018	5/13/2025	Non-Reimbursable	\$274,400	GSFC	SAA5-2017-3-N25689
324	24841	Society of Photo-Optical Instrumentation Engineers (SPIE)	Editor-in-Chief for Journal of Astronomical Telescopes, Instruments and Systems	1/24/2017	1/23/2023	Non-Reimbursable	\$34,066	GSFC	600-17-24841
325	24469		THE PRODUCTION OF NASA THEMED SCIENCE FICTION FILM CONCEPTS	1/23/2017	1/23/2022	Non-Reimbursable	\$8,700	GSFC	SAA5-17-1-N24469

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326 23781	Arizona Board of Regents for and behalf of Arizona State University	Mars Atmospheric Infrared Data Analysis	6/27/2017	3/30/2023	Reimbursable		GSFC	23781
327 23698		ON-ORBIT RADIATION HARDENED BY SOFTWARE TECHNOLOGY RESEARCH	2/13/2017	2/13/2022	Non-Reimbursable	\$10,519	GSFC	SAA5-16-03-N23698
328 22549	University of North Carolina Wilmington	IMPLEMENTATION AND OPERATION OF THE SUSTAINED OCEAN COLOR OBSERVATIONS WITH NANOSATELLITES (SOCON) PROJECT	6/1/2017	6/1/2022	Non-Reimbursable	\$160,000	GSFC	450-AGMT-0149
329 22332	LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	Space-Based Measurements for Applied and General Research in Earth Science	12/6/2018	12/5/2021	Non-Reimbursable	\$789,654	GSFC	600-18-22332-LLNL
330 21633	Space Exploration Technologies Corp.	Spacecraft RF Compatibility Testing	8/23/2016	8/23/2021	Reimbursable		GSFC	450-AGMT-0139

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331	18544		Construction and Operation of Unmanned Aerial System (UAS) Runway on Wallops Island	10/1/2015	3/31/2022	Non-Reimbursable	\$1,715,055	GSFC	
332	14465	Simons Foundation	Origins of Life Studies	4/30/2013	9/30/2023	Reimbursable		GSFC	SAA-13-14465
333	7533	Tom Doherty Associates LLC	PUBLICATION OF NASA THEMED WORKS OF FICTION	7/6/2011	7/6/2021	Non-Reimbursable		GSFC	SAA5-10-3-N7533
334	34711	City of Orlando	annex to Advanced Air Mobility Technology Research and Demonstration Activities	5/7/2021	5/7/2026	Non-Reimbursable	\$250,000	HQ	
335	34710	City of Orlando	Advanced Air Mobility Technology Research and Demonstration Activities	5/7/2021	5/7/2027	Non-Reimbursable	\$0	HQ	

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336	34709	Massachusetts Department of Transportation	annex to Advanced Air Mobility Technology Research and Demonstration Activities	5/7/2021	5/7/2026	Non-Reimbursable	\$250,000	HQ
337	34708	Massachusetts Department of Transportation	Advanced Air Mobility Technology Research and Demonstration Activities	5/7/2021	5/7/2026	Non-Reimbursable	\$0	HQ
338		Minnesota Department of Transportation	annex to Advanced Air Mobility Technology Research and Demonstration Activities	5/7/2021	5/7/2026	Non-Reimbursable	\$250,000	HQ
339	34705	Minnesota Department of Transportation	Advanced Air Mobility Technology Research and Demonstration Activities	5/7/2021	5/7/2026	Non-Reimbursable	\$0	HQ
340	34/14	North Central Texas Council of Governments	annex to Advanced Air Mobility Technology Research and Demonstration Activities	5/7/2021	5/7/2026	Non-Reimbursable	\$250,000	HQ

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341		North Central Texas Council of Governments	Advanced Air Mobility Technology Research and Demonstration Activities	5/7/2021	5/7/2026	Non-Reimbursable	\$0	HQ
342	34686		annex to Advanced Air Mobility Technology Research and Demonstration Activities	5/7/2021	5/7/2026	Non-Reimbursable	\$250,000	HQ
343	34682	Ohio Department of Transportation	Advanced Air Mobility Technology Research and Demonstration Activities	5/7/2021	5/7/2026	Non-Reimbursable	\$0	HQ
344	34122	Gearbox Labs, Inc.	For K-12 STEM Engagement and Education	3/30/2021	3/30/2024	Non-Reimbursable	\$9,625	HQ 34122
345		Noggin (A subsidiary of Viacom CBS)	Annex 2 to Under Umbrella SAA for NASA- Themed STEM Learning Experiences for Preschool-Aged Children and Their Families		12/29/2021	Non-Reimbursable	\$650	HQ

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346	33818	Orbital ATK, Inc	Small Spacecraft Electric Propulsion (SSEP) System	11/6/2020	11/5/2022	Non-Reimbursable	\$998,544	HQ STMD-SAA-ACO20-0021
347	33812	Rocket Lab USA, Inc	Proposal to the National Aeronautics and Space Administration (NASA) Space Technology Announcement of Collaborative Opportunity	11/6/2020	11/5/2022	Non-Reimbursable	\$1,246,814	HQ STMD-SAA-ACO20-0009
348	33811	Blue Origin, LLC	Increasing Engine Life & Thrust/Weight Through Characterization of Additively Manufactured Alloys	11/6/2020	11/5/2022	Non-Reimbursable	\$585,236	HQ STMD-SAA-ACO20-0034
349	33810	Phase Four, Inc	Lifetime Trend Testing of the Phase Four RF Thruster for Small Spacecraft Missions	11/6/2020	11/5/2022	Non-Reimbursable	\$424,161	HQ STMD-SAA-ACO20-0056
350	33809	STELLAR EXPLORATION, INC	Qualification Testing of Nanosatellite Propulsion System	11/6/2020	11/5/2022	Non-Reimbursable	\$1,098,460	HQ STMD-SAA-ACO20-0041

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351	33808	AEROJET ROCKETDYNE, INC	A Novel Approach to Human Exploration- Enabling Green Monopropellants for SmallSats	11/6/2020	11/5/2022	Non-Reimbursable	\$1,070,000	HQ STMD-SAA-ACO20-0036
352		CORNERSTONE RESEARCH GROUP, INC.	Additively Manufactured TPS Arc Jet Evaluation	11/6/2020	11/5/2022	Non-Reimbursable	\$897,358	HQ STMD-SAA-ACO20-0038
353	33806	Elementum 3D, Inc	Reactive Additive Manufacturing for Fourth Industrial Revolution Exploration Systems (RAMFIRE)	11/6/2020	11/5/2022	Non-Reimbursable	\$1,117,904	HQ STMD-SAA-ACO20-0026
354		SPACE EXPLORATION TECHNOLOGIES CORP	In-flight Imagery and Thermal Measurement of Starship during Orbital Reentry	11/6/2020	11/5/2022	Non-Reimbursable	\$1,195,400	HQ STMD-SAA-ACO20-0025
355	33804	Ahmic Aerospace, LLC	Hypersonic Instrumentation and Thermal Protection System Material Characterization Test Methodology	11/6/2020	11/5/2022	Non-Reimbursable	\$786,480	HQ STMD-SAA-ACO20-22

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356	33803	Spacefactory, Inc	Design of an Additive Construction System for Lunar ISRU Application through Active Sample Testing in a Relevant Environment	11/6/2020	11/5/2022	Non-Reimbursable	\$627,355	HQ STMD-SAA-ACO20-53
357	33802	BLUE ORIGIN, LLC	Space Robot Operating System	11/6/2020	11/5/2022	Non-Reimbursable	\$2,112,823	HQ STMD-SAA-ACO20-32
358	33801	PH Matter, LLC	Advanced Alkaline Reversible Cell for Production of Hydrogen and Oxygen from ISRU-Generated Water	11/6/2020	11/5/2022	Non-Reimbursable	\$441,469	HQ STMD-SAA-ACO20-0012
359	33800	SPACE SYSTEMS LORAL, LLC	Lunar Dust Mitigation on Flexible Solar Arrays	11/6/2020	11/5/2022	Non-Reimbursable	\$965,210	HQ STMD-SAA-ACO20-0020
360	33799	Box Elder Innovations, LLC	Enhanced Pulsed Electro-Acoustic Analysis	11/6/2020	11/5/2022	Non-Reimbursable	\$868,613	HQ STMD-SAA-ACO20-0001

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361	33798	Gloyer-Taylor Laboratories, LLC	UCDS Demonstration and Evaluation	11/6/2020	11/5/2022	Non-Reimbursable	\$93,581	HQ STMD-SAA-ACO20-0004
362	33797	SPACE SYSTEMS LORAL, LLC	Advancing the TRL of Novel Diamond-Like-Coating for Protection of Solar Cell Interconnectors from High-Energy Electric Thruster Plume Erosion	11/6/2020	11/5/2022	Non-Reimbursable	\$268,388	HQ STMD-SAA-ACO20-0019
363	33795	SPACE SYSTEMS LORAL, LLC	Bang-Bang Propellant Feed System for the 12 kW Hall Thruster	11/6/2020	11/5/2022	Non-Reimbursable	\$461,692	HQ STMD-SAA-ACO20-0024
364	33794	IN Space, LLC	Rapid Development of Regeneratively Cooled RDRE Chambers for Space Engines	11/6/2020	11/5/2022	Non-Reimbursable	\$950,222	HQ STMD-SAA-ACO20-0044
365		SPACE EXPLORATION TECHNOLOGIES CORP	Space-rated FOSS Interrogator For Cryogenic Temperature Monitoring In Space	11/6/2020	11/5/2022	Non-Reimbursable	\$540,219	HQ STMD-SAA-ACO20-0010

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366	33335	Arizona State University	Lucy in Space Grade 6-12 Contest	9/23/2020	10/16/2021	Non-Reimbursable	\$40,000	HQ
367		Oak Ridge Associated Universities, Inc.	Annex No. 1 Under Umbrella SAA for Increasing Access to STEM Engagement and STEM Education Opportunities and Experiences	12/15/2020	12/15/2025	Non-Reimbursable	\$54,375	HQ
368		Oak Ridge Associated Universities, Inc.	Umbrella SAA for Increasing Access to STEM Engagement and STEM Education Opportunities and Experiences	12/15/2020	12/15/2025	Non-Reimbursable	\$0	HQ
369	33145	Discovery Education, Inc.	Non-Reimbursable Space Act Agreement for K-12 STEM Engagement and Education	11/10/2020	11/10/2025	Non-Reimbursable	\$75,625	HQ 33145
370		SPACE EXPLORATION TECHNOLOGIES CORP	Flight Safety Coordination with NASA Assets	1/15/2021	1/15/2031	Non-Reimbursable	\$1,836,425	HQ

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371	32858	Microsoft Corporation	Annex 9 to Non-Reimbursable Space Act Umbrella Agreement between the National Aeronautics and Space Administration Lyndon B. Johnson Space Center and Microsoft Corporation for Strategic Alliance for STEM Education Activities	8/19/2020	8/19/2022	Non-Reimbursable	\$35,250	HQ	SAA-AD-18-26048
372	32857	STEM Next Opportunity Fund	Annex 1 Under Umbrella SAA for the STEM Next Million Girls Moonshot Initiative	8/27/2020	8/27/2022	Non-Reimbursable	\$95,500	HQ	32856
373	32856	STEM Next Opportunity Fund	Umbrella SAA for Increasing Access to STEM Engagement and STEM Education Opportunitites and Experiences	8/27/2020	8/27/2025	Non-Reimbursable	\$0	HQ	32856
374	32453	Noggin (A subsidiary of Viacom CBS)	Annex 1 Under Umbrella SAA for Artemis- Themed STEM Learning Experiences for Preschool-Aged Children and Their Families	10/20/2020	10/20/2022	Non-Reimbursable	\$54,500	HQ	32453
375	32452	Noggin (A subsidiary of Viacom CBS)	Umbrella SAA for NASA-Themed STEM Learning Experiences for Preschool-Aged Children and Their Families	10/20/2020	10/20/2022	Non-Reimbursable	\$0	HQ	32452

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376	31562	U.S. SATELLITE LABORATORY, INC	Annex 1 under Umbrella SAA for Collaboration on the Endeavor Science Teaching Certificate Project	12/18/2019	12/18/2024	Non-Reimbursable	\$100,350	HQ
377	31561	U.S. SATELLITE LABORATORY, INC	Umbrella SAA for Collaboraton on Endeavor Science Teacher Certificate Project and STEM Engagement Activities	12/18/2019	12/18/2024	Non-Reimbursable	\$0	HQ
378	30979	Spirit AeroSystems Inc	NRSAA Between NASA and Spirit AeroSystems Inc Under the Space Technology Announcement of Competitive Opportunity 2019, Improved Durability for a Low-Cost Reusable Launch Vehicle Manufactured via Friction Stir Welding	7/29/2019	6/1/2023	Non-Reimbursable	\$1,239,000	HQ ACO-2019-070
379	30978	Vulcan Wireless	NRSAA Between NASA and Vulcan Wireless Inc Under the Space Technology Announcement of Competitive Opportunity 2019, Resilience testing of Multi-Mode S- Band Transponder	7/29/2019	5/31/2022	Non-Reimbursable	\$1,085,438	HQ ACO-2019-061
380	30977	SPACE EXPLORATION TECHNOLOGIES CORP	NRSAA Between NASA and SpaceX Under the Space Technology Announcement of Competitive Opportunity 2019, Cryogenic Fluid Transfer Technology Demonstration: Technical Assessment and Concept of Operations Definition	7/29/2019	7/29/2021	Non-Reimbursable	\$720,529	HQ ACO-2019-058

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381	30976	BLUE ORIGIN, LLC	NRSAA Between NASA and Blue Origin Under the Space Technology Announcement of Competitive Opportunity 2019, Lunar Lander Advanced Nozzle Collaboration	9/30/2021	Non-Reimbursable	\$1,229,980	HQ ACO-2019-053
382	30975	BLUE ORIGIN, LLC	NRSAA Between NASA and Blue Origin Under the Space Technology Announcement of Competitive Opportunity 2019, Precision Safe Lunar Landing System Development	10/30/2021	Non-Reimbursable	\$1,050,000	HQ ACO-2019-051
383	30974	BLUE ORIGIN, LLC	NRSAA Between NASA and Blue Origin Under the Space Technology Announcement of Competitive Opportunity 2019, Primary Fuel Cell Power System for Lunar Landers	7/29/2022	Non-Reimbursable	\$1,450,000	HQ ACO-2019-050
384	30972	Colorado Power Electronics Inc.	NRSAA Between NASA and Colorado Power Electronics Inc Under the Space Technology Announcement of Competitive Opportunity 2019, Qualification and Integration Tests of the Colorado Power Electronics Prototype Development Unit Power Processing Unit with NASA and Commercial Hall Thrusters	12/29/2022	Non-Reimbursable	\$1,300,000	HQ ACO-2019-025
385	30971	SPACE EXPLORATION TECHNOLOGIES CORP	NRSAA Between NASA and Space Exploration Technologies (SpaceX) Under the Space Technology Announcement of Competitive Opportunity 2019, Development of Large Vehicle Landing Surface Interaction and In-Situ Resource Based Risk Mitigation	7/29/2021	Non-Reimbursable	\$1,098,078	HQ ACO-2019-059

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386	30968	LOCKHEED MARTIN	NRSAA Between NASA and Lockheed Martin Under the Space Technology Announcement of Competitive Opportunity 2019, Integration of Autonomous Robotics for Plant-Based Systems in Deep Space	7/29/2019	7/29/2021	Non-Reimbursable	\$148,733	HQ ACO-2019-077	
387	30967	LOCKHEED MARTIN	NRSAA Between NASA and Lockheed Martin Under the Space Technology Announcement of Competitive Opportunity 2019, Advanced Lightweight Powder Metallurgy for Hot Structures	7/29/2019	12/31/2021	Non-Reimbursable	\$1,040,000	HQ ACO-2019-075	
388	30963	SIERRA NEVADA CORP	NRSAA Between NASA and Sierra Nevada Corporation Under the Space Technology Announcement of Competitive Opportunity 2019, Upper Stage Recovery	7/29/2019	12/30/2021	Non-Reimbursable	\$282,413	HQ ACO-2019-063	
389	30962	SIERRA NEVADA CORP	NRSAA Between NASA and Sierra Nevada Corporation Under the Space Technology Announcement of Competitive Opportunity 2019, Scientifically Calibrated In-Flight Imagery	7/29/2019	7/29/2021	Non-Reimbursable	\$1,022,908	HQ ACO-2019-062	
390	30961	Aerogel Technologies	NRSAA Between NASA and Aerogel Technologies LLC Under the Space Technology Announcement of Competitive Opportunity 2019, Mechanically Strong Polyimide Aerogels as Multifunctional Acoustic Insulation for Aerospace Applications	7/29/2019	9/29/2022	Non-Reimbursable	\$1,298,000	HQ ACO-2019-027	

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391	30960	AEROJET ROCKETDYNE, INC	NRSAA Between NASA and Aerojet Rocketdyne of DE Inc. Under the Space Technology Announcement of Competitive Opportunity 2019, Extensible Robotic Deposition Technology for Propulsion Systems	7/29/2019	11/30/2021	Non-Reimbursable	\$1,197,474	HQ	ACO-2019-024
392	30959	Bally Ribbon Mills	NRSAA Between NASA and Bally Ribbon Mills Under the Space Technology Announcement of Competitive Opportunity 2019, ADEPT Spider Weave Thermal Testing	7/29/2019	9/30/2021	Non-Reimbursable	\$1,769,000	НQ	ACO-2019-023
393	30958	Advance Space LLC	NRSAA Between NASA and Advance Space LLC Under the Space Technology Announcement of Competitive Opportunity 2019, Advancing Lunar Navigation Technologies to Enable Exploration and Commercial Development		9/30/2023	Non-Reimbursable	\$670,696	HQ	ACO-2019-018
394	30933	SPACE SYSTEMS LORAL, LLC	NRSAA Between NASA and Space Systems Loral LLC Under the Space Technology Announcement of Competitive Opportunity 2019, Advancing Qualification Protocols of Ultra-lightweight 5-junction Solar Cells Applied to Flexible Solar Array Power Modules	7/29/2019	12/29/2022	Non-Reimbursable	\$1,752,052	HQ	ACO-2019-011
395	30924	SPACE SYSTEMS LORAL, LLC	NRSAA Between NASA and Space Systems Loral LLC Under the Space Technology Announcement of Competitive Opportunity 2019, Advanced Packaging Methods for Next-Generation Reflectors		4/30/2024	Non-Reimbursable	\$1,280,000	HQ	ACO-2019-010

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396 30921	Anashpere Inc.	NRSAA Between NASA and Anasphere Inc, Under the Space Technology Announcement of Competetive Opportuity 2019. Ground Testing of (Hypersonic Inflatable Aerodynamic Decelerator) HIAD Hydrogen Gas Generator		12/29/2021	Non-Reimbursable	\$458,520	HQ	ACO-2019-002
397 30620	Mercy Corps	Increasing Smallholder Farmer Resilience to Climate Impacts by Integrating Earth Observations into Mercy Corps' AgriFin	8/1/2019	3/29/2022	Non-Reimbursable	\$100,000	HQ	
398 29345	Mercy Corps	Utilizing Earth Observations for Humanitarian and Development Activities	3/29/2019	3/29/2022	Non-Reimbursable	\$552,379	HQ	
399 29333	Evergreen Exhibitions	Above and Beyond Touring Exhibit	3/29/2019	3/28/2024	Non-Reimbursable	\$10,109	НQ	
400 29332	Mercy Corps	Utilizing Earth Observations for Humanitarian and Development Activities	3/29/2019	3/29/2022	Non-Reimbursable	\$0	HQ	

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE		CENTER TRACKING NUMBER (IF ANY)
401	28421	Neuron Fuel Inc. dba Tynker	Annex 1 Under Umbrella SSA for Engaging Students in NASA-Themed Coding Activities	12/20/2018	12/20/2023	Non-Reimbursable	\$56,599	HQ 2	28421
402	28420	Neuron Fuel Inc. dba Tynker	Umbrella SAA for Engaging Students in NASA-Themed Coding Activities	12/20/2018	12/20/2023	Non-Reimbursable	\$0	HQ 2	28420
403	27229	RFC MEDIA, LLC	Continued Outreach Collaboration on Third Rock Radio	1/30/2020	1/29/2025	Non-Reimbursable	\$6,473	HQ 2	77229
404	26840	Google Inc	Annex 2 - Google Virtual Reality for Public Engagement	10/16/2017	10/16/2022	Non-Reimbursable	\$35,470	HQ 2	23261
405	26617	Breakthrough Starshot Foundation, LLC	Enceladus Flyby Mission Concept Study	9/13/2018	9/12/2023	Non-Reimbursable	\$72,834	HQ	

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
406 26616		Collaboration on Breakthrough Search for Life	9/13/2018	9/12/2023	Non-Reimbursable	\$0	HQ	
407 24182	American Girl Brands, LLC	American Girl Project Collaboration	10/7/2016	10/7/2021	Non-Reimbursable	\$20,560	HQ	
408 24181	American Girl Brands, LLC	American Girl Collaboration	10/7/2016	10/7/2021	Non-Reimbursable	\$0	HQ	24181
409 23264	Google Inc	Google Expeditions Annex	9/15/2016	9/14/2021	Non-Reimbursable	\$37,221	HQ	23261-1
410 23261		Google Education and Public Engagement Umbrella	9/15/2016	9/14/2021	Non-Reimbursable	\$0	HQ	23261

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER C	ENTER TRACKING UMBER (IF ANY)
411	22690	Walt Disney Parks and Resorts, U.S., Inc. d/b/a Walt Disney Imagineering	Collaboration on Space-themed Update to Epcot Theme Park	7/31/2017	7/31/2022	Non-Reimbursable	\$22,773	HQ 22	2689
412	22689	Walt Disney Parks and Resorts U.S., Inc d/b/a Walt Disney Imagineering	Collaboration on Public Outreach Projects	7/31/2017	7/31/2022	Non-Reimbursable	\$0	HQ 22	2689
413	14267	The Conrad Foundation	Conrad Foundation Umbrella	12/13/2013	12/13/2021	Non-Reimbursable		HQ S.	AA-AD-13-14267
414	34171	Carbon Mapper	Carbon Plume Mapper (CPM)	3/19/2021	5/19/2023	Reimbursable		JPL	
415	34060	BATTELLE MEMORIAL INSTITUTE, INC	National Ecological Observatory Network (NEON) NEON Imaging Spectrometer (NIS)SENSOR SUPPORT	6/23/2021	6/23/2024	Reimbursable		JPL	

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
416	33853	MASTEN SPACE SYSTEMS, INC	Interplanetary Network Services Support	3/1/2021	5/1/2023	Reimbursable		JPL
417	33632	Veripos (US) Inc.	Global Navigation Satellite Systems Corrections Data	3/11/2021	3/11/2023	Reimbursable		JPL
418	33349	Sienza Inc.	High Energy and Long Cycle Life Li-ion Batteries with Novel Silicon Anode	2/2/2021	2/2/2024	Reimbursable		JPL
419	33258	Citrus College	Pathways in STEM: Cross-Sector Partnerships, Experiential Learning, and Professional Development	12/15/2020	12/15/2025	Reimbursable		JPL
420			Support to the Development of Advanced Data Compression Techniques (Python)	10/23/2020	10/23/2023	Reimbursable		JPL

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421	31774	The University of Maryland	Exploitation of COSMIC-2 Data in Numerical Weather Prediction	12/8/2020	12/8/2021	Reimbursable		JPL
422	31616	ASTROBOTIC TECHNOLOGY, INC	Deep Space Network Services Support	4/15/2020	2/15/2022	Reimbursable		JPL
423	31570	PaR Systems, LLC	Piezoelectric Percussive Augmenter of Rotary Drill (PARoD) for Sampling Cores from Fuel Debris – Phase 2	1/31/2020	1/31/2023	Reimbursable		JPL
424	30629	LOUISIANA STATE UNIVERSITY	Synthetic Aperture Radar Interferometry (InSAR) Evaluation in Support of Louisiana Regional Geospatial Modeling	12/16/2019	9/30/2023	Reimbursable		JPL 82-105663
425	30354	JOHNS HOPKINS UNIVERSITY / APPLIED PHYSICS LAB	Augmented Reality Computer-Aided Design Visualizations	9/10/2019	1/10/2022	Reimbursable		JPL

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER TRACKING NUMBER (IF ANY)
426	29920	Photon Spot, Inc.	Superconducting Nanowire Single Photon Detector Technology Development	3/27/2019	4/27/2022	Reimbursable		JPL
427	29811	Leidos, Inc.	S&T Advancement for MDUSV Operations	1/9/2020	1/9/2022	Reimbursable		JPL
428	29799	HARRIS CORP	Navigation Technology Satellite-3 Geosynchronous Earth Orbit Experiment	4/10/2019	4/10/2023	Reimbursable		JPL
429		THE AEROSPACE CORPORATION	EMPIRICAL STUDIES OF RADIATION DAMAGE TO SPACECRAFT ELECTRONICS AND MATERIALS	5/17/2019	5/17/2024	Reimbursable		JPL
430		The George Washington University	Data Science Biomarker Technologies for the Information Technology for Cancer Research Program	11/14/2018	11/14/2021	Reimbursable		JPL

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431		Beckman Research Institute of the City of Hope	Develop Generalized Newton-Euler Inverse Mass Operator (GNEIMO) Algorithms, Methodology, and Software for Internal Coordinate Molecular Dynamics of Bio- Molecular Systems	11/29/2017	11/29/2021	Reimbursable		JPL
432		Northrop Grumman Systems Corporation	Support the Development of Advanced Ground Antennas for the US Government	3/19/2018	3/26/2023	Reimbursable		JPL
433	25621	GeoOptics, Inc.	GeoOptics for Advanced Gravity Mapping and Crosslink Occultation	7/26/2017	2/28/2022	Reimbursable		JPL
434	24877	Raytheon Vision Systems	New Vital Infrared Sensor Technology Acceleration (VISTA) Industry Consortium, with multiple Indusry Parnters (FLIR, L-3 Communications Cincinnati Electronics, Lockheed Martin Corporation, Northrop Grumman Corporation, and Raytheon), to condudt research on infrared (IR) detectors.	7/12/2017	7/12/2022	Reimbursable		JPL
435	24666	Northrop Grumman Corporation	Microwave Temperature and Humidity Profiler (MTHP) Modification for Northrop Grumman Space Corporation (NGSC) Upper Tropospheric Measurements and assess how well water vapor measurements can be performed	6/6/2017	4/25/2022	Reimbursable		JPL

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436	23388	Placidus LLC	Production of Smart-Wire Driven by a Vibratory Piezoelectric Actuator and a Rotary Motor for Penetrating Occlusions	1/31/2022	Reimbursable		JPL
437	23050	NYSEARCH / Northeast Gas Association (NGA)	DEVELOP METHANE SNIFFER FOR A SMALL UNMANNED AERIAL SYSTEM (MS- SUAV)	7/1/2023	Reimbursable		JPL
438	22772	Opto-Knowledge Systems, Inc.	National Oceanographic and Atmospheric Administration (NOAA) Small Business Innovation Research (SBIR) Subcontract – Opto-Knowledge Systems, Inc (OKSI) – Capillary Absorption Spectrometer for In- Situ, Underwater Gas Analysis	8/31/2021	Reimbursable		JPL
439	22012	RKI Instruments	Methane Sniffer Commercialization 3/29/2016	2/28/2022	Reimbursable		JPL
440	20611	Direct Electron LP	BSI Development for Scientific CMOS Image Sensors 6/21/2016	1/31/2022	Reimbursable		JPL

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441		California Department of Water Resources	Subseasonal Prediction of Atmospheric Rivers and the Madden-Julian Oscillation for Water Management in California	6/14/2016	6/30/2022	Reimbursable		JPL
442	17868	Consolidated Edison Company of New York, Inc.	Advanced Health Monitoring of Steam Pipe Systems – Phase IIIA	7/22/2015	7/31/2021	Reimbursable		JPL
443	13464	Space Exploration Technologies	SURFACE CHEMICAL AND MATERIALS ANALYSIS OF SPACECRAFT HARDWARE	10/1/2012	2/27/2022	Reimbursable		JPL
444	11998	The Boeing Company	Ionizing Radiation Evaluation of Materials and Semiconductor Devices	5/16/2012	4/1/2025	Reimbursable		JPL
445	34188	Next American Astronaut, Inc.	NAA Commercial LEO Joint Feasibility Study	3/10/2021	2/28/2022	Non-Reimbursable	\$46,279	JSC SAA-UA-21-34188

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446	34168	KBR WYLE SERVICES, LLC	ANNEX ONE for HUMAN HEALTH AND PERFORMANCE FACILITIES UTILIZATION	5/26/2021	5/29/2026	Reimbursable		JSC	SAA-SA-21-34167
447	34167	KBR WYLE SERVICES, LLC	HUMAN HEALTH AND PERFORMANCE FACILITIES UTILIZATION	5/26/2021	5/29/2026	Reimbursable		JSC	SAA-SA-21-34167
448	34138	INTUITIVE MACHINES, LLC	Annex to Engineering Analysis and Testing	5/27/2021	5/27/2026	Reimbursable		JSC	SAA-XA-21-34137-01
449	34137	INTUITIVE MACHINES, LLC	Engineering Analysis and Testing	5/27/2021	5/27/2026	Reimbursable		JSC	SAA-XA-21-34137
450	33898	Virgin Orbit	Annex to Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Virgin Orbit, LLC for Analysis and Simulation of a Transport Aircraft as a Launch Platform	2/11/2021	2/11/2022	Reimbursable		JSC	SAA2-403586

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451	33848	Amateur Radio on the International Space Station - USA	Amateur Radio on the ISS	3/23/2021	3/23/2026	Reimbursable		JSC	
452	33776	Amazon.com Services LLC	Project Kuiper MMOD Risk Assessment	5/19/2021	5/19/2023	Reimbursable		JSC	SAA-XI-21-33776
453		UNITED LAUNCH ALLIANCE, LLC	Annex 3 For Commercial Space Launch Vehicle Mission Insight Imagery Aircraft MIssion Repeat	1/20/2021	1/20/2023	Reimbursable		JSC	SAA-UA-21-33766-03
454	33506	Mass Challenge Houston	Participation in Mass Challenge Flywheel Program	4/30/2021	4/30/2024	Non-Reimbursable	\$12,170	JSC	SAA-XA-20-33506-01
455	33505	Mass Challenge Houston	COOPERATIVE SPACE COMMERCIALIZATION ACTIVITIES	4/30/2021	4/30/2024	Non-Reimbursable	\$0	JSC	SAA-XA-20-33505

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456 33367		Annex to Development of Lunar Lander Systems Technologies for Propellant Tanks	11/30/2020	12/31/2021	Reimbursable		JSC	SAA-XA-20-33367-04
457 33026		Thermal Runaway Cell Testing for Vent Gas Analysis (Annex 2)	11/20/2020	11/20/2022	Reimbursable		JSC	SAA-EA-20-33026
458 32919		UTMB DIETETIC STUDENT EXPERIENCE AT NASA	8/12/2020	8/12/2025	Non-Reimbursable	\$37,971	JSC	32919
459 32916		Mechanical Parachute Reefing Release Mechanism	10/23/2020	10/23/2022	Non-Reimbursable	\$99,912	JSC	
460 32778	Planet	ISS and Planet Operational Agreement	1/5/2021	1/4/2026	Non-Reimbursable	\$42,065	JSC	

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461		Cheval de Feu Aerospace Corporation, dba LaMont Aerospace	FOR LOW-EARTH ORBIT COMMERCIAL SERVICES DEVELOPMENT	2/11/2021	2/10/2026	Non-Reimbursable	\$25,020	JSC	SAA-OZ-21-32760
462	32738	Limitless Space Institute	Advanced Power and Propulsion Partnership	4/18/2021	4/18/2026	Reimbursable		JSC	SAA-EA-21-32738
463		ARMAND BAYOU NATURE CENTER	Environmental Education Programs	7/23/2020	7/23/2025	Non-Reimbursable	\$19,075	JSC	SAA-JA-32690
464		Texas A&M Engineering Experiment Station	Reimbursable Space Act Agreement Between National Aeronautics and Space Administration and Texas A&M Engineering Experiment Station for Texas Aerospace Scholars	9/3/2020	9/3/2022	Reimbursable		JSC	SAA-AD-20-32623
465	32418	UNIVERSITY OF TEXAS	Collaboration in Robotics Technology	4/10/2020	3/10/2025	Non-Reimbursable	\$130,206	JSC	SAA-EA-20-32418

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466	32361	Techshot, Inc.	Techshot Commercial Resource Request	5/20/2020	5/20/2022	Reimbursable		JSC	
467	32319		Annex One for Collaboration on Materials and Technolgies	6/16/2020	6/16/2025	Non-Reimbursable	\$10,458	JSC	SAA-OA-20-32319-01
468	32253	TECHSHOT, INC	TECHSHOT ISS RESEARCH HARDWARE	5/29/2020	5/29/2025	Non-Reimbursable	\$24,483	JSC	SAA-OZ-20-32253
469	32239		TO COLLABORATE WITH NASA TO CONDUCT COMMERCIAL ACTIVITIES ON THE INTERNATIONAL SPACE STATION	5/4/2020	5/4/2022	Reimbursable		JSC	SAA-OZ-20-32239
470	32236	Adidas America, Inc	COLLABORATION ON ADVANCED MATERIALS AND TECHNOLOGIES	6/16/2020	6/16/2025	Non-Reimbursable	\$0	JSC	SAA-OA-20-32236

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471 32208		Baylor University and NASA Collaboration to Enhance Imagery from Space	1/15/2021	1/15/2026	Non-Reimbursable	\$60,708	JSC	
472 32079	WOUNDED WARRIOR PROJECT	HOUSTON SOLDIER RIDE	3/31/2020	3/31/2025	Non-Reimbursable	\$7,270	JSC	SAA-JA-20-32079
473 32068	Houston Livestock Show and Rodeo, Inc.	REIMBURSABLE SPACE ACT AGREEMENT BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION LYNDON B. JOHNSON SPACE CENTER AND HOUSTON LIVESTOCK SHOW AND RODEO, INC. FOR TEXAS HIGH SCHOOL AEROSPACE SCHOLARS	7/16/2020	12/31/2021	Reimbursable		JSC	SAA-AD-20-32068
474 32042	Baylor University	BAYLOR UNIVERSITY AND NASA COLLABORATION ON SPACE IMAGERY AND OUTREACH TECHNOLOGIES, SCIENCE AND ENGINEERING RESEARCH, AND STEM INITIATIVES.	1/15/2021	1/15/2026	Non-Reimbursable	\$0	JSC	SAA-OA-20-32042
475 32031	RADIO CONTROL CLUB	NON-REIMBURSABLE SPACE ACT FOR RADIO CONTROLLED AIRPLANE OPERATIONS	5/7/2020	5/7/2025	Non-Reimbursable	\$6,061	JSC	SAA-JA-20-32031

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
476		Collaborative Composites Solutions Corporation	Annex 2 - Development of Additive Manufacturing Techniques for Spacecraft Structures and Heat Shields	3/26/2020	3/15/2024	Non-Reimbursable	\$78,286	JSC	SAA-EA-19-29452
477	31987	Chemring Energetic Devices	Development of Next Generation Ordnance Initiating System Architecture & Design	7/20/2020	7/20/2025	Non-Reimbursable	\$201,686	JSC	SAA-EA-20-31987
478	31923	MERIDIAN HEALTH SYSTEMS	MICROWAVE TISSUE SOLDERING FOR WOUND CLOSURE	4/6/2020	4/6/2022	Reimbursable		JSC	SAA-EA-20-31923
479	31791	Texas A&M Engineering Experiment Station	Collaborative Research in Hypersonic Flow Physics	2/18/2020	2/18/2022	Non-Reimbursable	\$16,371	JSC	SAA-EA-20-31791
480	31778	NANORACKS, LLC	CONDUCT COMMERCIAL ACTIVITIES ON THE INTERNATIONAL SPACE STATION: NANORACKS		12/18/2021	Reimbursable		JSC	31778

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481		IOWA NORTHWEST AREA EDUCATION AGENCY	Space Settlement Design Competition	7/8/2020	7/8/2023	Reimbursable		JSC	SAA-XA-20-31734
482		TECHNOLOGY COLLABORATION CENTER	Collaboration & Partnership Development Initiative	8/11/2020	8/11/2025	Non-Reimbursable	\$138,761	JSC	SAA-XA-20-31729
483	31717	VIRGIN GALACTIC, LLC	Vigin Galactic Private Astronaut Mission	5/15/2020	5/15/2025	Non-Reimbursable	\$27,095	JSC	SAA-OA-20-31717
484	31714	TEXAS INSTRUMENTS, INC	Strategic Alliance for STEM Engagement and Outreach Activities	3/17/2020	3/17/2025	Non-Reimbursable	\$0	JSC	SAA-AD-20-31714
485		Alpha Space Test and Research Alliance LLC	CONDUCT COMMERCIAL ACTIVITIES ON THE INTERNATIONAL SPACE STATION	12/18/2019	12/18/2021	Reimbursable		JSC	

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486	31386	UNIVERSITY OF ILLINOIS	Aero-capture and Atmospheric Entry, Descent, and Landing Guidance, Navigation, and Control (GN&C)	2/28/2020	2/28/2025	Non-Reimbursable	\$29,056	JSC	SAA-EA-20-31386
487	31322	The Proctor & Gamble Company	Laundry Detergent for Space	8/18/2020	8/18/2022	Non-Reimbursable	\$111,504	JSC	SAA-EA-20-31322
488	31321	The Proctor & Gamble Company	Cleaning in Space	8/18/2020	8/18/2025	Non-Reimbursable	\$0	JSC	SAA-EA-20-31321
489	31150	UNIVERSITY OF TEXAS	Hypersonic Environment and Material Response Testing and Research	3/10/2020	3/10/2025	Non-Reimbursable	\$81,372	JSC	SAA-EA-20-31150
490	31149	UNIVERSITY OF TEXAS	Collaborative Research, Technology Transfer, Education and Outreach Activities	3/10/2020	3/10/2025	Non-Reimbursable	\$0	JSC	SAA-EA-20-31149

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491		HOUSTON INDEPENDENT SCHOOL DISTRICT	Annex to existing umbrella - Collaboration for STEM Engagement, Education, and Community Outreach Activities	11/15/2019	11/15/2022	Reimbursable		JSC	SAA-AD-18-27594
492		WILLIAM MARSH RICE UNIVERSITY	HUMANOID ROBOTICS AND RELATED TECHNOLOGIES	3/10/2020	3/10/2025	Reimbursable		JSC	SAA-EA-19-30784
493		WILLIAM MARSH RICE UNIVERSITY	COLLABORATIVE TECHNOLOGY DEVELOPMENT, INNOVATION, AND RESEARCH	3/10/2020	3/10/2025	Reimbursable		JSC	SAA-EA-19-30783
494	30679	NANORACKS, LLC	OPERATION OF THE NANORACKS SYSTEM ABOARD THE INTERNATIONAL SPACE STATION	7/31/2019	7/31/2024	Non-Reimbursable	\$24,597	JSC	
495		Science Applications International Corporation	Annex 1 between NASA JSC and SAIC for Testing in the RITF	2/10/2020	2/10/2025	Reimbursable		JSC	SAA-NA-20-30536-01

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496	30535		Reimbursable Umbrella Agreement between NASA JSC and SAIC	2/10/2020	2/10/2025	Reimbursable		JSC	SAA-NA-20-30535
497 :	30388	Katy Independent School District	MEMORANDUM OF AGREEMENT BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINIMISTRATION LYNDON B. JOHNSON SPACE CENTER AND KATY INDEPENDENT SCHOOL DISTRICT FOR NASA CONTINUITY OF OPERATONS PROGRAM	9/30/2019	9/30/2024	Non-Reimbursable	\$0	JSC	SAA-JA-20-30388
498 :	30163		Annex 9 for Collaborative Research, Education and Outreach Activities	9/4/2019	5/2/2022	Non-Reimbursable	\$43,654	JSC	SAA-EA-19-30163
499 :	30119		Engineering Analysis and Testing for Advanced Technology Development	1/27/2020	1/27/2025	Reimbursable		JSC	SAA-EA-19-30119
500 :	30108		JSC/SGT Annex to Cryogenically - Fueled Upper Stage Technologies	8/28/2019	8/27/2022	Reimbursable		JSC	SAA8-1726082

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501	29921	Smart Information Flow Technologies	Monitoring Emergent Duress Under Long Lasting Allostasis (MEDULLA)	11/3/2019	11/3/2021	Reimbursable		JSC	
502		Manned Space Flight Education Foundation, Inc.	NON-REIMBURSBLE SAA WITH MANNED SPACEFLIGHT EDUCATION FOUNDATION, INC. FOR COLLABORATIVE EDUCATION AND OUTREACH ACTIVITIES		7/15/2024	Non-Reimbursable	\$3,095	JSC	SAA-AD-19-29865
503	29824	Underwriters Laboratories Inc.	Battery Analysis and Testing	7/3/2019	7/3/2021	Reimbursable		JSC	SAA-EA-19-29824
504	29823	Underwriters Laboratories Inc.	Engineering Analysis and Testing for Advanced Technology Development	7/3/2019	7/3/2024	Reimbursable		JSC	SAA-EA-19-29823
505	29812	RED.com, Inc.	RED Digital Cinema Core Camera for ISS	1/23/2020	1/23/2025	Non-Reimbursable	\$1,271,505	JSC	29812

	AM ID JMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
506 29	736	Harris County Sheriff's Office	Performance of Training Events for First Responders at the Neutral Buoyancy Laboratory	8/25/2020	8/31/2021	Reimbursable		JSC	
507 29	9557	UNIVERSITY OF WASHINGTON	Mental Modes Cycles	5/29/2019	5/29/2022	Reimbursable		JSC	
508 29	9456	Houston Exponential	Cooperative Community Outreach Activities	6/6/2019	6/6/2024	Non-Reimbursable	\$227,792	JSC	SAA-XA-19-29456
509 29	9452		Collaboration for Advanced Manufacturing Techniques	3/15/2019	3/15/2024	Non-Reimbursable	\$0	JSC	SAA-EA-19-29452
510 29	9366	Axiom Space, Inc.	Flight Operations Directorate Axiom Training	9/23/2019	8/27/2024	Reimbursable		JSC	SAA-OA-19-29366-01

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511	29365	Axiom Space, Inc.	Low-Earth Orbit Commercial Development Utilizing the ISS	8/27/2019	8/27/2024	Reimbursable		JSC	SAA-19-OA-29365
512	29343	BLUE ORIGIN, LLC	Engineering Analysis and Testing	2/8/2020	2/8/2025	Reimbursable		JSC	SAA-EA-20-29343
513	28973	SGT, LLC	NASA JSC/SGT Vendor Partner Agreement	9/10/2019	9/10/2024	Reimbursable		JSC	SAA-CA-19-28973
514	28812	UNIVERSITY OF HOUSTON	SAA with University of Houston for Collaborative Research, Technology Transfer, Education and Outreach Activities	11/5/2018	11/5/2023	Non-Reimbursable	\$0	JSC	SAA-CA-19-28812
515	28679	Ben Barber Innovation Academy	High School Students United with NASA to Create Hardware (HUNCH) Program	10/3/2018	10/2/2023	Non-Reimbursable	\$14,111	JSC	SAA-OZ-18-28679

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
516	28672	LOCKHEED MARTIN	INTEGRATION AND OPERATIONS SUPPORT RELATED TO THE EM-1 CREW INTERFACE TECHNOLOGY PAYLOAD	12/17/2018	12/17/2023	Reimbursable		JSC	SAA-GA-18-28672
517	28527		Asteroid Exploration Mission Concept Development	8/20/2019	8/20/2022	Non-Reimbursable	\$15,126	JSC	SAA-XA-19-28527
518	28383	Ross Aviation Operations LLC	A/M32A-60 "Dash 60" Jet Starter Loan to Ross Aviation	10/3/2018	10/2/2023	Non-Reimbursable	\$5,950	JSC	SAA-CA-18 28383
519	28379	BiVACOR Inc.	Analysis of Artificial Heart System for In- Human Testing	10/1/2019	10/1/2021	Reimbursable		JSC	SAA-NA-20-28379-01
520	28378	BiVACOR Inc.	SAFETY, RELIABILITY, AND ENGINEERING ANALYSES OF THE BIVACOR TOTAL ARTIFICIAL HEART	10/1/2019	10/1/2024	Reimbursable		JSC	SAA-NA-20-28378

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521	28358	New York Space Alliance	The Fostering of Space Entrepreneurship	10/5/2018	10/5/2023	Non-Reimbursable	\$0	JSC	SAA-XB-18-28358
522	28307	DreamUp	Collaboration in Support of Educational Outreach	8/1/2018	7/31/2023	Non-Reimbursable	\$34,139	JSC	SAA-OZ-18-28307
523	28182	SOUTHWEST RESEARCH INSTITUTE	Commercialization of NASA's NASGRO software	11/21/2018	11/21/2023	Non-Reimbursable	\$196,654	JSC	SAA-EA-19-28182
524	28089	Alvin High School	For Students Collaborating with NASA to Produce Hardware or Other Useful Products under the High School Students Unified with NASA to Create Hardware (HUNCH) Program	9/20/2018	9/19/2023	Non-Reimbursable	\$57,440	JSC	SAA-OZ-18-28089
525	28036	Microsoft Corporation	Annex 4 to Non-Reimbursable Space Act Umbrella Agreement between the National Aeronautics and Space Administration Lyndon B. Johnson Space Center and Microsoft Corporation for Strategic Alliance for STEM Education Activities	2/12/2019	2/12/2022	Non-Reimbursable	\$193,256	JSC	SAA-AD-18-28036-04

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526	28012		NASA JSC 's Continued Support of the Joint Development of the Charged Particle Detector with PVAMU		5/1/2022	Non-Reimbursable	\$25,447	JSC	SAA-EA-18-28012
527	27894	Space Family Education, Inc	Aaron Cohen Child Care Center	6/27/2019	6/27/2024	Non-Reimbursable	\$2,102,672	JSC	SAA-XA-18-27894
528		WILLIAM MARSH RICE UNIVERSITY	Rice University Annex 6 JSC Partnership in Water Reuse Development for Human Exploration Missions	6/25/2018	5/2/2022	Non-Reimbursable	\$112,175	JSC	SAA-EA-18-27827
529	27635		Annex 1 for Collaborative Research, Technology Transfer, and Education Activities	8/27/2019	8/27/2021	Non-Reimbursable	\$8,139	JSC	SAA-XA-19-27635
530	27634	University of Houston-Clear Lake	Umbrella for Collaborative Research, Technology Transfer, and Education Activities	8/23/2019	8/23/2024	Non-Reimbursable	\$0	JSC	SAA-XA-19-27634

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531	17/6/11	THE REGENTS OF THE UNIVERSITY OF COLORADO	Life and Microgravity Science Research Support	5/8/2019	5/7/2022	Non-Reimbursable	\$24,037	JSC	SAA-OZ-18-27601
532		HOUSTON INDEPENDENT SCHOOL DISTRICT	Collaboration for STEM Engagement, Education, and Community Outreach Activities	8/28/2018	8/27/2023	Reimbursable		JSC	SAA-AD-18-27594
533	27517	Rocklin Unified School	HIGH SCHOOL STUDENTS COLLABORATING WITH NASA TO PRODUCE HARDWARE OR OTHER USEFUL PRODUCTS UNDER THE HUNCH PROGRAM		5/8/2023	Non-Reimbursable	\$12,603	JSC	SAA-OZ-18-27517
534	27425	Peanuts Worldwide, LLC	PUBLIC AND EDUCATION OUTREACH AND STEM PROJECTS	6/20/2018	6/20/2023	Non-Reimbursable	\$0	JSC	SAA-GA-18-27245
535	27253	BIGELOW AEROSPACE	NON-REIMBURSABLE TO LOW-EARTH ORBIT COMMERCIAL DEVELOPMENT	3/30/2018	3/29/2023	Non-Reimbursable	\$98,558	JSC	OZ-18-27253

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536	26943	Wheeling High School	High School Students Collaborating with NASA to Produce Hardware or Other Useful Products Under the High School Students United with NASA to Create Hardware (HUNCH) Program	3/21/2018	3/20/2023	Non-Reimbursable	\$12,835	JSC	SAA-OZ-18-26943
537	26934	Hawthorne High School	Students Collaborating with NASA to Produce Haardware or Other Useful Products Under the High School Students United with NASA to Create Hardware (HUNCH) Program	3/23/2018	3/22/2023	Non-Reimbursable	\$33,644	JSC	SAA-OZ-18-26934
538	26933	Alief Independent School District	Students Collaborating with NASA to Produce Hardware or Other Useful Products Under the High School Students United with NASA to Create Hardware (HUNCH) Program		1/18/2023	Non-Reimbursable	\$112,831	JSC	SAA-OZ-17-26933
539	26826	THE BOEING COMPANY	WB-57 Technology Demonstrator Platform	2/14/2018	2/13/2022	Reimbursable		JSC	
540		UNITED LAUNCH ALLIANCE, LLC	Commercial Space Launch Vehicle Mission Insight	2/16/2018	10/2/2021	Reimbursable		JSC	SAA-UA3-17-26763

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541		UNITED LAUNCH ALLIANCE, LLC	Commercial Space Launch Vehicle Developments	2/5/2018	2/5/2023	Reimbursable		JSC	SAA-UA3-17-26762
542		BAY AREA HOUSTON ECONOMIC PARTNERSHIP	COOPERATIVE AND COMMUNITY OUTREACH ACTIVITIES	10/17/2017	10/16/2022	Non-Reimbursable	\$145,128	JSC	SAA-AD-18-26418
543	1/6///	NORTH CAROLINA STATE UNIVERSITY	Annex 2 to Collaborative Aerospace Research, Development, and Testing Opportunities	10/13/2017	5/31/2023	Non-Reimbursable	\$17,165	JSC	SAA-EA-17-26277
544	26205	Industrial Fabrics Association International	Umbrella Space Act Agreement Industrial Fabrics Association International (IFAI) Exposition	8/2/2018	8/2/2023	Non-Reimbursable	\$0	JSC	SAA-EA-17-26205
545	26188	Fairport Central School District	High School Students Collaborating with NASA to Produce Hardware or Other Useful Products Under the HUNCH Program	11/1/2017	10/31/2022	Non-Reimbursable	\$40,412	JSC	SAA-OZ-17-26188

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546	26179	Council Rock School District	High School Students Collaborating with NASA to Produce Hardware or Other Useful Products Under HUNCH	10/13/2017	10/12/2022	Non-Reimbursable	\$40,412	JSC	SAA-OZ-17-26179
547	26048	Microsoft Corporation	Non-Reimbursable Space Act Umbrella Agreement between the National Aeronautics and Space Administration Lyndon B. Johnson Space Center and Microsoft Corporation for Strategic Alliance for STEM Education Activities	2/6/2018	2/5/2023	Non-Reimbursable	\$0	JSC	SAA-AD-18-26048
548	26023	Raytheon Intelligence, Information and Services	Annex 5 Authorizing Clean Room, Animation, Manufacturing, and Other General Commercialization Activities Under the Neutral Buoyancy Laboratory (NBL) Operations Contract (NOC)	10/18/2017	9/30/2022	Reimbursable		JSC	SAA-CA-17-26023-5
549	26021	Raytheon Intelligence, Information and Services	Annex 4 Authorizing Support for Department of Defense Diving and Other Commercialization Activities Under the Neutral Buoyancy Laboratory (NBL) Operations Contract (NOC)		9/30/2022	Reimbursable		JSC	SAA-CA-17-26021-04
550	26017	Raytheon Intelligence, Information and Services	Annex 3 Authorizing Remotely Operated Vehicles (ROV) and Autonomous Underwater Vehicles (AUV) Commercialization Activities Under the Neutral Buoyancy Laboratory (NBL) Operations Contract (NOC)	9/27/2017	9/30/2022	Reimbursable		JSC	SAA-CA-26017-03

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551		Raytheon Intelligence, Information and Services	Annex 2 Authorizing Non-Destructive Testing Commercialization Activities Under the Neutral Buoyancy Laboratory (NBL) Operations Contract (NOC)		9/30/2022	Reimbursable		JSC	SAA-CA-17-26016-02
552		Raytheon Intelligence, Information and Services	Annex 1 Authorizing Safety, Survival, Emergency Response, and Leadership Training as Commercialization Activities Under the Neutral Buoyancy Laboratory (NBL) Operations Contract (NOC)	9/27/2017	9/30/2022	Reimbursable		JSC	SAA-CA-17-26007-01
553		Raytheon Intelligence, Information and Services	Umbrella Agreement Authorizing Commercialization Activities Under the Neutral Buoyancy Laboratory (NBL) Operations Contract (NOC) Contract	9/27/2017	9/30/2022	Reimbursable		JSC	SAA-CA-17-26006
554		ULSTER COUNTY BOARD OF COOPERATIVE EDUCATIONAL SERVICES	ULSTER COUNTY BOARD OF COOPERATIVE EDUCATIONAL SERVICES FOR HIGH SCHOOL STUDENTS COLLABORATING WITH NASA TO PRODUCE HARDWARE OR OTHER USEFUL PRODUCTS UNDER THE HUNCH PROGRAM	10/13/2017	10/12/2022	Non-Reimbursable	\$50,182	JSC	SAA-OZ-17-26003
555	25999	St. Mary`s County Public Schools	St. Mary`s County Public Schools for High School Students Collaborating with NASA to Produce Hardware or Other Useful Products Under the HUNCH Program	10/26/2017	10/26/2022	Non-Reimbursable	\$40,783	JSC	SAA-OZ-17-25999

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556		Saint John Valley Technology Center	Saint John Valley Technology Center for Students Collaborating with NASA to Produce Hardware or Other Useful Products Under the HUNCH Program	11/27/2017	11/26/2022	Non-Reimbursable	\$24,299	JSC	SAA-OZ-17-25997
557		WILLIAM MARSH RICE UNIVERSITY	Annex 3 to Collaborative Research, Education and Outreach Activities	9/13/2017	9/13/2021	Non-Reimbursable	\$17,165	JSC	SAA-EA-17-25908
558	1/51/13	WILLIAM MARSH RICE UNIVERSITY	Collaborative Research, Education and Outreach Activities	5/2/2017	5/3/2022	Non-Reimbursable	\$0	JSC	SAA-XA-17-25143
559	25102	Greater Houston Partnership	Cooperative Community Outreach Activities	8/9/2017	8/9/2022	Non-Reimbursable	\$589,059	JSC	SAA-XA-17-25102
560	24920	The SME Education Foundation	SME Hunch A	3/1/2017	2/28/2022	Non-Reimbursable	\$150,502	JSC	SAA-OA-17-24920

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561	24788		Safety, Reliability, and Engineering Analysis for Deep Water Drilling Projects	5/16/2017	5/16/2022	Reimbursable		JSC	SAA-NA-17-24788
562	24777	Bay Area Houston Advanced Technology Consortium	Failure Analysis	2/7/2017	2/7/2022	Reimbursable		JSC	
563		Bay Area Houston Advanced Technology Consortium	NASA Safety Training Center Classes	2/7/2017	2/7/2022	Reimbursable		JSC	
564	24615	Bay Area Houston Advanced Technology Consortium	RITF Workmanship Training	2/7/2017	2/7/2022	Reimbursable		JSC	SAA-NA-17-24615-01
565	24614	Bay Area Houston Advanced Technology Consortium	Technology Partnerships	2/7/2017	2/7/2022	Reimbursable		JSC	

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566	24331	Houston Livestock Show & Rodeo	NONREIMBURSABLE SPACE ACT AGREEMENT BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION LYNDON B. JOHNSON SPACE CENTER AND HOUSTON LIVESTOCK SHOW & RODEO FOR COMMUNITY RELATIONS AND EDUCATION OUTREACH ACTIVITIES	3/16/2022	Non-Reimbursable	\$90,898	JSC SAA-AD-17-24331
567	24326	Conway School District	Students Collaborating with NASA to Produce Hardware or Other Useful Products Under the HUNCH (High School Students United with NASA to Create Hardware) Program	11/1/2022	Non-Reimbursable	\$236,218	JSC SAA-OZ-17-24326
568	24275	Windsor Board of Education	Students Collaborating with NASA to Produce Hardware or Other Useful Products Under the HUNCH Program	11/27/2022	Non-Reimbursable	\$231,674	JSC SAA-OZ-17-24275
569	24255	Texas Space Technology Applications and Research LLC	Architecture Expertise for Modular Integrated Stackable Layer Applications	12/12/2021	Reimbursable		JSC SAA-EA-17-24255
570	23749	Space Tango Inc	New Operation of the TangoLab-1 and Future Platforms Aboard the International Space Station National Laboratory 6/1/2017	5/31/2022	Non-Reimbursable	\$83,852	JSC SAA-OZ-17-23749

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571	23506	University of Houston, Clear Lake	Handling of Historic Spaceflight Documents	1/23/2017	1/23/2022	Non-Reimbursable	\$13,413	JSC	SAA-IA-16-23506
572	23270	Axiom Space, LLC	LOW-EARTH ORBIT COMMERCIAL DEVELOPMENT	8/24/2016	8/24/2021	Non-Reimbursable	\$270,725	JSC	
573		University of Texas MD Anderson Cancer Center	Childrens Space Suit Art Project	9/12/2016	9/12/2021	Non-Reimbursable	\$0	JSC	SAA-XA-16-23242
574	23114	Orbital Sciences Corporation	Space Vehicle Mockup Facility (SVMF) Floor Space for the Orbital ATK Cygnus Mockup	1/19/2017	1/19/2022	Non-Reimbursable	\$173,543	JSC	SAA-CA-16-23114
575		BAYLOR COLLOGE OF MEDICINE	Collaborative Research on Health Care Infrastructure in Remote Settings	7/6/2017	7/6/2022	Non-Reimbursable	\$0	JSC	SAA-SA-16-23020

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576 22998		The Center For Agriculture Science and Engineering Laboratory	10/1/2016	10/1/2021	Non-Reimbursable	\$44,657	JSC	SAA-JA-16-22998
577 22798	City of League City	Memorandum of Agreement Between City of League City, Texas Office of Emergency Management		9/19/2021	Non-Reimbursable	\$99,952	JSC	SAA-JA-16-22798
578 21267	Toledo Public School District	Toledo Public School District Students Collaborating with NASA under the HUNCH (High School Students United with NASA to Create Hardware) Program	7/9/2016	7/9/2021	Non-Reimbursable	\$40,980	JSC	SAA-OA-15-21267
579 19449		Annex 14 to NASA JSC Non-Government Use Of Facilities Umbrella Agreement	3/12/2015	4/30/2022	Reimbursable		JSC	SAA-EA-15-19449
580 19348		annex to NASA JSC Non-Government Use Of Facilities Umbrella Agreement	3/10/2015	4/30/2022	Reimbursable		JSC	SAA-EA-15-19348

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581	18884	United Launch Alliance	COMMERCIAL SPACE CAPABILITIES COLLABORATION	12/18/2014	6/30/2022	Non-Reimbursable	\$72,171,186	JSC SAA-QA-14-18884
582	18883	SpaceX	COMMERCIAL SPACE CAPABILITIES COLLABORATION	12/18/2014	3/31/2022	Non-Reimbursable	\$3,675,899	JSC SAA-QA-14-18883
583	18881	ATK SPACE SYSTEMS INC	COMMERCIAL SPACE CAPABILITIES COLLABORATION	12/18/2014	12/31/2022	Non-Reimbursable	\$1,918,680	JSC SAA-QA-14-18881
584	17138		Annex 11 to NASA JSC Non-Government Use Of Facilities Umbrella Agreement - Utilization of the Engineering Directorate Advanced Radio Frequency Technology Laboratory and Electronics Manufacturing Facility	3/19/2014	4/30/2022	Reimbursable		JSC SAA-EA-14-17138
585	16521	The Houston Zoo	Attwater's Prairie Chicken Project	5/12/2014	5/12/2024	Non-Reimbursable	\$46,152	JSC SAA-JA-13-16521

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586 15032	Jacobs Technology Inc.	Annex 4 to NASA JSC Non-Government Use Of Facilities Umbrella Agreement - Advanced Materials, Gas Ananlysis, Material Evaluation Labs	6/28/2013	4/30/2022	Reimbursable		JSC	SAA-EA-13-15032
587 14945	Jacobs Technology Inc.	Annex 3 to NASA JSC Non-Government Use Of Facilities Umbrella Agreement - Vibration, Acoustic, Tnermal, Vacuum and EMI Testing	6/28/2013	4/30/2022	Reimbursable		JSC	SAA-EA-13-14945
588 14944	Jacobs Technology Inc.	Annex 2 to NASA JSC Non-Government Use Of Facilities Umbrella Agreement - Utilize the NASA JSC Engineering Directorate Probability of Detection (POD) Non Destructive Evaluation (NDE) test specimens to perform NASA Special Level NDE qualification examinations	6/10/2013	4/30/2022	Reimbursable		JSC	SAA-EA-13-14944
589 14708	Jacobs Technology Inc.	Annex 1 to NASA JSC Non-Government Use Of Facilities Umbrella Agreement - Utilize the NASA JSC Engineering Directorate Structures Test Laboratory (STL) to perform Fracture Mechanics Properties Testing		4/30/2022	Reimbursable		JSC	SAA-EA-13-14708
590 14705	I lacone I achnology inc	NASA JSC Non-Government Use Of Facilities Umbrella Agreement	5/13/2013	4/30/2022	Reimbursable		JSC	SAA-EA-13-14705

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591 34757	SPACE EXPLORATION TECHNOLOGIES CORP	KCA-4513-23 Rev Basic, Annex No 23 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities	6/4/2021	9/30/2022	Reimbursable		KSC	KCA-4513-23 Rev Basic
592 34568	Jacobs Technologies Inc.	KCA-4604-5 Rev Basic, Annex 5 to Fully Reimbursable Umbrella SAA between NASA and Jacobs Technology Inc for C3PW	4/28/2021	9/30/2021	Reimbursable		KSC	KCA-4604-5 Rev Basic
593 34267	Blue Origin Florida, LLC	KCA-4555-15 Rev Basic, Annex 15 annex to Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities		12/3/2023	Reimbursable		KSC	KCA-4555-15 Rev Basic
594 34253	AMENTUM SERVICES, INC.	KCA-4662-10 Rev Basic, Annex 10 to Fully Reimbursable Umbrella SAA between NASA and Amentum Services, Inc. for C3PW	4/14/2021	9/30/2021	Reimbursable		KSC	KCA-4662-10 Rev Basic
595 34194	AMENTUM SERVICES, INC.	KCA-4662-9 Rev Basic, Annex 9 to Fully Reimbursable Umbrella SAA between NASA and Amentum Services, Inc. for C3PW	3/5/2021	9/30/2021	Reimbursable		KSC	KCA-4662-9 Rev Basic

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596	34125	Blue Origin Florida, LLC	KCA-4555-13, Annex 13 to Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities	12/3/2023	Reimbursable		KSC	KCA-4555-13 Rev Basic
597	34123	Blue Origin Florida, LLC	KCA-4555-12 Rev Basic, Annex 12 to Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities	9/30/2021	Reimbursable		KSC	KCA-4555-12 Rev Basic
598	34110	Pine Island Investment Group, LLC	KCA-4653, Revision Basic for Real Property License with Pine Island Investment Group, LLC	4/7/2026	Non-Reimbursable	\$0	KSC	KCA-4653 Rev Basic
599	34023	Firefly Aerospace Inc.	KCA-4671-1, Revision Basic Annex 1 to the Reimbursable Space Act Agreement (RSAA) Umbrella Agreement Between NASA KSC and Firefly Aerospace Inc. for Launch Telemetry and Communication Services at Vandenberg Air Force Base	3/2/2023	Reimbursable		KSC	KCA-4671-1 Rev. Basic
600	34022	Firefly Aerospace Inc.	KCA-4671, Rev. Basic Fully Reimbursable Umbrella SAA Between NASA KSC and Firefly Aerospace Inc. for Use of Center Capabilities	3/1/2026	Reimbursable		KSC	KCA-4671 Rev. Basic

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601	33890	Blue Origin Florida, LLC	KCA-4555-14, annex 14 to Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities	2/10/2021	12/3/2023	Reimbursable		KSC	KCA-4555-14 Rev Basic
602	33886	ASRC Federal Data Solutions	KCA-4559-31 Rev Basic, Annex 31 to Fully Reimbursable Umbrella SAA between NASA and ASRC Federal Data Solutions for C3PW	1/6/2021	9/30/2021	Reimbursable		KSC	KCA-4559-31 Rev Basic
603	33885	ASRC Federal Data Solutions	Annex 30 to Fully Reimbursable Umbrella SAA between NASA and ASRC Federal Data Solutions for C3PW	12/18/2020	9/30/2021	Reimbursable		KSC	KCA-4559-30 Rev Basic
604	33871	ASRC Federal Data Solutions	Annex 28 to Fully Reimbursable Umbrella SAA between NASA and ASRC Federal Data Solutions for C3PW	12/17/2020	9/30/2021	Reimbursable		KSC	KCA-4559-28 Rev Basic
605	33859	AMENTUM SERVICES, INC.	KCA-4662-8, Annex 8 to Fully Reimbursable Umbrella SAA between NASA and Amentum Services, Inc. for C3PW	1/12/2021	9/30/2021	Reimbursable		KSC	KCA-4662-8 Rev Basic

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606 33792	ORBITAL ATK, INC	KCA-4500-11, Annex 11 to Reimbursable Umbrella SAA between KSC and Orbital Sciences Corporation for Use of Center Capabilities	12/15/2020	1/31/2022	Reimbursable		KSC	KCA-4500-11 Rev Basic
607 33756	AMENTUM SERVICES, INC.	KCA-4662-7 Rev Basic, Annex 7 to Fully Reimbursable Umbrella SAA between NASA and Amentum Services, Inc. for C3PW	3/3/2021	9/30/2021	Reimbursable		KSC	KCA-4662-7 Rev Basic
608 33736	HSG, LLC d/b/a HERNDON	Annex 8 to Fully Reimbursable Umbrella SAA between NASA and HSG, LLC d/b/a Herndon Solutions Group for C3PW	11/16/2020	9/30/2021	Reimbursable		KSC	KCA-4660-8 Rev Basic
609 33726	SPACE EXPLORATION TECHNOLOGIES CORP	KCA-4513-22, Annex 22 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities	11/16/2020	9/30/2022	Reimbursable		KSC	KCA-4513-22 Rev Basic
610 33677	HSG, LLC 0/b/a HERNDON	Annex 7 to Fully Reimbursable Umbrella SAA between NASA and HSG, LLC d/b/a Herndon Solutions Group for C3PW	11/16/2020	9/30/2021	Reimbursable		KSC	KCA-4660-7 Rev Basic

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE SIGNAT	ATURE DATE E	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
611		HSG, LLC d/b/a HERNDON SOLUTIONS GROUP	Annex 5 to Fully Reimbursable Umbrella SAA between NASA and HSG, LLC d/b/a Herndon Solutions Group for C3PW	020 9	9/30/2021	Reimbursable		KSC	KCA-4660-5 Rev Basic
612	33633	ASRC Federal Data Solutions	Annex 27 to Fully Reimbursable Umbrella SAA between NASA and ASRC Federal Data Solutions for C3PW	2020 9	9/30/2021	Reimbursable	 -	KSC	KCA-4559-27 Rev Basic
613	33609	AMENTUM SERVICES, INC.	Annex 6 to Fully Reimbursable Umbrella SAA between NASA and Amentum Services, Inc. for C3PW	2020 9	9/30/2021	Reimbursable		KSC	KCA-4662-6 Rev Basic
614	33608	AMENTUM SERVICES, INC.	Annex 5 to Fully Reimbursable Umbrella SAA between NASA and Amentum Services, Inc. for C3PW	2020 9	9/30/2021	Reimbursable		KSC	KCA-4662-5 Rev Basic
615	33607	AMENTUM SERVICES, INC.	Annex 4 to Fully Reimbursable Umbrella SAA between NASA and Amentum Services, Inc. for C3PW	2020 9	9/30/2021	Reimbursable		KSC	KCA-4662-4 Rev Basic

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616 33593	AMENTUM SERVICES, INC.	Annex 3 to Fully Reimbursable Umbrella SAA between NASA and Amentum Services, Inc. for C3PW	11/12/2020	9/30/2021	Reimbursable		KSC	KCA-4662-3 Rev Basic
617 33592	AMENTUM SERVICES, INC.	Annex 2 to Fully Reimbursable Umbrella SAA between NASA and Amentum Services, Inc. for C3PW	11/12/2020	9/30/2021	Reimbursable		KSC	KCA-4662-2 Rev Basic
618 33588	UNITED LAUNCH ALLIANCE, LLC	KCA-4556-34, Annex 34 to Fully Reimbursable SAA between United Launch Alliance, LLC and NASA for Use of Center Capabilities	10/21/2020	2/21/2023	Reimbursable		KSC	KCA-4556-34 Rev Basic
619 33570	HSG, LLC d/b/a HERNDON SOLUTIONS GROUP	Annex 6 to Fully Reimbursable Umbrella SAA between NASA and HSG, LLC d/b/a Herndon Solutions Group for C3PW	11/2/2020	9/30/2021	Reimbursable		KSC	KCA-4660-6 Rev Basic
620 33564	THE BOEING COMPANY	KCA-4515-9, Annex 9 to Reimbursable Umbrella SAA between NASA KSC and The Boeing Company for Use of Center Capabilities	11/17/2020	9/30/2022	Reimbursable		KSC	KCA-4515-9 Rev Basic

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	I V P P C I P A C I P P P I M P N I	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
621		HSG, LLC d/b/a HERNDON SOLUTIONS GROUP	Annex 4 to Fully Reimbursable Umbrella SAA between NASA and HSG, LLC d/b/a Herndon Solutions Group for C3PW	10/21/2020	9/30/2021	Reimbursable		KSC	KCA-4660-4 Rev Basic
622	コスストトイ	SPACE EXPLORATION TECHNOLOGIES CORP	KCA-4513-21, Annex 21 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities	10/15/2020	9/30/2021	Reimbursable		KSC	KCA-4513-21 Rev Basic
623		HSG, LLC d/b/a HERNDON SOLUTIONS GROUP	Annex 3 to Fully Reimbursable Umbrella SAA between NASA and HSG, LLC d/b/a Herndon Solutions Group for C3PW	10/16/2020	9/30/2021	Reimbursable		KSC	KCA-4660-3 Rev Basic
624	1.3.371(17)	HSG, LLC d/b/a HERNDON SOLUTIONS GROUP	Annex 2 to Fully Reimbursable Umbrella SAA between NASA and HSG, LLC d/b/a Herndon Solutions Group for C3PW	10/7/2020	9/30/2022	Reimbursable		KSC	KCA-4660-2 Rev Basic
625		HSG, LLC d/b/a HERNDON SOLUTIONS GROUP	Fully Reimbursable Umbrella SAA between NASA and HSG, LLC d/b/a Herndon Solutions Group for C3PW	10/7/2020	9/30/2022	Reimbursable		KSC	KCA-4660 Rev Basic

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626 33421	AMENTUM SERVICES, INC.	Annex 1 to Fully Reimbursable Umbrella SAA between NASA and Amentum Services, Inc. for C3PW	11/2/2020	9/30/2021	Reimbursable		KSC	KCA-4662-1 Rev Basic
627 33420	AMENTUM SERVICES, INC.	Fully Reimbursable Umbrella SAA between NASA and Amentum Services, Inc. for C3PW	10/29/2020	9/30/2021	Reimbursable		KSC	KCA-4662 Rev Basic
628 33413	Jacobs Technologies Inc.	Annex 4 to Fully Reimbursable Umbrella SAA between NASA and Jacobs Technology Inc for C3PW	9/24/2020	9/30/2021	Reimbursable		KSC	KCA-4604-4 Rev Basic
629 33334	THE BOEING COMPANY	KCA-4515-8, Annex 8 to Reimbursable Umbrella SAA between NASA KSC and The Boeing Company for Use of Center Capabilities	9/15/2020	8/21/2023	Reimbursable		KSC	KCA-4515-8 Rev Basic
630 33316	Foundation	KCA-4659, Rev. Basic, Lease Agreement for Center for Space Education (CSE) Space at the Astronauts Memorial Foundation (AMF)		9/30/2022	Non-Reimbursable	\$0	KSC	KCA-4659 Rev Basic

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631	13317U	SPACE EXPLORATION TECHNOLOGIES CORP	KCA-4513-20, Annex 20 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities	8/25/2020	9/30/2021	Reimbursable		KSC	KCA-4513-20 Rev Basic
632	33158	FLORIDA POWER & LIGHT	KCA-4655-1, Revision Basic Annex 1 to Reimbursable Space Act Umbrella Agreement Between NASA KSC and Florida Power and Light for Use of Center Services	6/17/2021	6/17/2022	Reimbursable		KSC	KCA-4655-1 Rev Basic
633	33157	FLORIDA POWER & LIGHT	KCA-4655, Rev. Basic to Fully Reimbursable Umbrella Space Act Agreement (RUSAA) between NASA KSC and Florida Power and Light Company (FPL) for Services at KSC		6/30/2022	Reimbursable		KSC	KCA-4655, Rev. Basic
634	1.3.7 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	UNITED LAUNCH ALLIANCE, LLC	KCA-4556-33, Annex to Fully Reimbursable SAA between United Launch Alliance, LLC and NASA for Use of Center Capabilities	6/11/2020	2/21/2023	Reimbursable		KSC	KCA-4556-33 Rev Basic
635	32750	KT Engineering Corporation	KCA-4650-1, Annex No. 1 to the Fully Reimbursable Umbrella SAA Between NASA KSC and KT Engineering Corp. for Ground Systems Design Review	9/1/2020	9/1/2021	Reimbursable		KSC	KCA-4650-1 Rev Basic

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636	32749	KT Engineering Corporation	KCA-4650, Rev. Basic Fully Reimbursable Umbrella SAA Between NASA KSC and KT Engineering Corp. for Use of Center Capabilities	9/1/2020	9/1/2025	Reimbursable		KSC	KCA-4650 Rev Basic
637	32438	Blue Origin Florida, LLC	KCA-4555-11, Annex to Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities	4/10/2020	9/30/2021	Reimbursable		KSC	KCA-4555-11
638	32270	Florida League of Cities	KCA-4601-2, Annex 2 to Reimbursable Umbrella SAA between NASA KSC and Florida League of Cities for Development and Demonstration of Sustainable Composites (KCA-4601)	5/3/2021	11/3/2023	Reimbursable		KSC	KCA-4601-2 Rev Basic
639	32262	Space Perspective, Inc.	KCA-4641-1, Annex No. 1 to the Fully Reimbursable Umbrella SAA Between NASA KSC and Space Perspective, Inc. for Historical Weather Data Analysis	4/27/2020	4/27/2022	Reimbursable		KSC	KCA-4641-1 Rev Basic
640	32261	Space Perspective, Inc.	KCA-4641, Rev. Basic Fully Reimbursable Umbrella SAA Between NASA KSC and Space Perspective, Inc. for Use of Center Capabilities	4/27/2020	4/27/2025	Reimbursable		KSC	KCA-4641 Rev Basic

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641 32230	UNITED LAUNCH ALLIANCE, LLC	KCA-4556-31,Annex 31 to Fully Reimbursable SAA between United Launch Alliance, LLC and NASA for Use of Center Capabilities	3/13/2020	2/21/2023	Reimbursable		KSC	KCA-4556-31 Rev Basic
642 32039	Blue Origin Florida, LLC	Annex 8 to Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities	2/21/2020	12/3/2023	Reimbursable		KSC	KCA-4555-8 Rev Basic
643 31927	The Astronauts Memorial Foundation	KCA-4638, Revision Basic for Reimbursable Space Act Agreement Between NASA KSC and the Astronaut Memorial Foundation, Inc. for Services at the Center for Space Education	6/5/2020	6/4/2025	Reimbursable		KSC	KCA-4638
644 31878	Blue Origin Florida, LLC	Annex No. 7 to Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities	1/27/2020	12/3/2023	Reimbursable		KSC	KCA-4555-7 Rev Basic
645 31537	UNITED LAUNCH ALLIANCE,	Annex No. 28 to Fully Reimbursable SAA between United Launch Alliance, LLC and NASA for Use of Center Capabilities	11/14/2019	2/21/2023	Reimbursable		KSC	KCA-4556-28 Rev Basic

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646	31382	THE BOEING COMPANY	KCA-4515-7, Reimbursable Umbrella SAA between NASA KSC and The Boeing Company for Use of Center Capabilities	10/17/2019	8/20/2023	Reimbursable		KSC	KCA-4515-7 Rev. Basic
647	31293	UNITED LAUNCH ALLIANCE, LLC	Annex No. 27 to Fully Reimbursable SAA between United Launch Alliance, LLC and NASA for Use of Center Capabilities	9/25/2019	2/21/2023	Reimbursable		KSC	KCA-4556-27 Rev Basic
648	31241	Eastern Florida State College	High Schools United with NASA to Create Hardware (HUNCH)	10/22/2019	10/22/2024	Non-Reimbursable	\$28,331	KSC	KCA-4629
649	31127	THE BOEING COMPANY	Annex No. 3 to Reimbursable Umbrella SAA between NASA KSC and The Boeing Company for Use of Center Capabilities (KCA-4515-3)		9/30/2021	Reimbursable		KSC	KCA-4515-3 Rev Basic
650	31059	RUAG Space USA, Inc	Annex No. 3 to Reimbursable Umbrella SAA with RUAG SPACE USA, INC for NASA Testing Services		10/2/2021	Reimbursable		KSC	KCA-4544-3 Rev Basic

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651	ranuu /	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 18 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities		9/30/2022	Reimbursable		KSC	KCA-4513-18 Rev Basic
652	30919	SPACE FLORIDA	NASA John F. Kennedy Space Center License To Space Florida In Order To Allow Completion of Certain Exploration Park Phase 2 Related Improvements	9/24/2019	9/24/2021	Non-Reimbursable	\$100	KSC	KCA-4618 Rev. Basic
653	30833	SPACE COAST MACHINIST APPRENTICESHIP PROGRAM, INC.	KCA-4625, Nonreimbursable Space Act Agreement Between the National Aeronautics and Space Administration John F. Kennedy Space Center and Space Coast Machinist Apprenticeship Program for High Schools United with NASA to Create Hardware (HUNCH) Program	10/24/2019	10/24/2024	Non-Reimbursable	\$28,397	KSC	KCA-4625 Rev Basic
654	30770	UNITED LAUNCH ALLIANCE, LLC	Annex No. 24 to Fully Reimbursable SAA between United Launch Alliance, LLC and NASA for Use of Center Capabilities (KCA- 4556-24)	7/19/2019	2/21/2023	Reimbursable		KSC	KCA-4556-24 Rev Basic
655	30659	RELATIVITY SPACE, INC	KCA-4622-1, Annex No. 1 to the Reimbursable Umbrella Space Act Agreement with Relativity Space for NASA Testing of Material Corrosion Characterization Study, Phases 1 and 2	8/13/2019	8/13/2022	Reimbursable		KSC	KCA-4622-1 Rev Basic

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656 30658	RELATIVITY SPACE, INC	KCA-4622, Reimbursable Umbrella Space Act Agreement between NASA KSC and Relativity Space, Inc for NASA Testing Services	8/13/2019	8/13/2024	Reimbursable		KSC	KCA-4622 Rev Basic
657 30494	UNIVERSITY OF DAYTON	Annex No. 2 to Reimbursable Umbrella SAA between KSC and University of Dayton for Corrosion Testing (KCA-4550-2)	9/11/2019	12/22/2022	Reimbursable		KSC	KCA-4550-2 Rev Basic
658 30480	Full Sail University	Nonreimbursable Space Act Agreement Between The National Aeronautics and Space Administration John F. Kennedy Space Center and Full Sail University for Furtherance of STEM Learning by Providing a Senior Software Design Project	12/9/2019	12/9/2021	Non-Reimbursable	\$20,058	KSC	KCA-4628 Rev Basic
659 30212	Blue Origin Florida, LLC	Annex No.5 to Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities	4/25/2019	12/3/2023	Reimbursable		KSC	KCA-4555-5 Rev Basic
660 30165		Fully Reimbursable Umbrella SAA between NASA and Jacobs Technology Inc for C3PW	4/29/2019	9/30/2021	Reimbursable		KSC	KCA-4604 Rev Basic

ROW PAM NO. NUMI		TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
661 30047	7 Blue Origin Florida, LLC	Annex No. 4 to Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities (KCA-4555-4)	4/5/2019	12/3/2023	Reimbursable		KSC	KCA-4555-4 Rev Basic
662 29903	ASTRONAUTS MEMORIAL FOUNDATION	Nonreimbursable SAA between NASA and the Astronaut Memorial Foundation for a NASA Exploration Station	4/5/2019	4/5/2024	Non-Reimbursable	\$1,082,832	KSC	KCA-4605 Rev Basic
663 29841	1 Winston-Salem State University	KSC Food Production and Winston-Salem State University	7/24/2019	7/24/2023	Non-Reimbursable	\$85,105	KSC	KCA-4611 Rev Basic
664 29816	SIERRA LOBO, INC	Nonreimbursable SAA between Sierra LOBO INC. and NASA KSC for development, Operations, and Data Analysis for a Cryogenic Fluid Management Cubesat Mission (KCA-4600)	7/26/2019	7/26/2024	Non-Reimbursable	\$174,984	KSC	KCA-4600 Rev Basic
665 29814	Florida League of Cities	Reimbursable Umbrella SAA between NASA KSC and Florida League of Cities for Development and Demonstration of Sustainable Composites (KCA-4601)	7/1/2019	7/1/2024	Reimbursable		KSC	KCA-4601 Rev Basic

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666 29804	Astrotech Space Operations, LLC	KCA-4603, Nonreimbursable Space Act Agreement Between NASA KSC and Astrotech Space Operations, LLC for Reciprocal Access to Fiber Optic Communications Circuit	8/21/2019	8/21/2024	Non-Reimbursable	\$172,855	KSC	KCA-4603 Rev. Basic
667 29787	Blue Origin Florida, LLC	Annex No. 3 to Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities (KCA-4555-3)	2/14/2019	12/3/2023	Reimbursable		KSC	KCA-4555-3 Rev Basic
668 29729	Blazing Trails	KCA-4606, Nonreimbursable Space Act Agreement Between the National Aeronautics and Space Administration John F. Kennedy Space Center and Blazing Trails for High Schools United with NASA to Create Hardware (HUNCH) Program		5/8/2024	Non-Reimbursable	\$48,432	KSC	KCA-4606 Rev Basic
669 29653	Pressure Dynamic Consultants PDC Machines Inc.	Research and Development of Hydrogen Liquid to Gas Conversion Machine	6/5/2019	9/30/2022	Reimbursable		KSC	KCA-4598-1 Rev Basic
670 29652	Pressure Dynamic Consultants PDC Machines Inc.	Reimbursable Umbrella SAA with PDC for High Pressure Hydrogen Pump Research and Testing	6/5/2019	6/4/2024	Reimbursable		KSC	KCA-4598 Rev Basic

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671	29609	Blue Origin Florida, LLC	Annex No. 2 to Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities	12/27/2018	12/3/2023	Reimbursable		KSC	KCA-4555-2 Rev Basic
672	29503	University of North Dakota	Nonreimbursable Space Act Agreeement with University of North Dakota MISSE-11 Mission for Spacesuite Material Sample	12/13/2018	12/13/2023	Non-Reimbursable	\$2,214	KSC	KCA-4595 Rev Basic
673		UNITED LAUNCH ALLIANCE, LLC	Annex No.13 to Fully Reimbursable SAA between United Launch Alliance, LLC and NASA for Use of Center Capabilities	12/3/2018	2/21/2023	Reimbursable		KSC	KCA-4556-13 Rev Basic
674	29407	Mayo Clinic Jacksonville	Nonreimbursable SAA with Mayo Clinic Jacksonville for Stem Cell Research Project - SpaceX CRS-16 Mission	11/26/2018	11/26/2021	Non-Reimbursable	\$9,478	KSC	KCA-4593 Rev Basic
675	29404	Level 3 Communications, LLC	Space Act Agreement between NASA, KSC and Level 3 Communications LLC for Use of Various Fiber Optics Terminals	2/22/2019	2/22/2024	Non-Reimbursable	\$0	KSC	KCA-4586 Rev Basic

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676	29277	BLUE ORIGIN, LLC	Annex 1 for Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities	12/3/2018	12/3/2023	Reimbursable		KSC	KCA-4555-1 Rev. Basic
677	29276	Blue Origin Florida, LLC	Fully Reimbursable Umbrella SAA Between NASA KSC and Blue Origin Florida, LLC for Use of Center Capabilities	12/3/2018	12/3/2023	Reimbursable		KSC	KCA-4555 Rev. Basic
678	29263	THE BOEING COMPANY	Annex No. 4 to Reimbursable Umbrella SAA between NASA KSC and The Boeing Company for Use of Center Capabilities	1	8/21/2023	Reimbursable		KSC	KCA-4515-4 Rev Basic
679	29191	Volusia County Schools	KCA-4591, Nonreimbursable SAA between NASA, KSC and Volusia County Schools for High School Students United with NASA to Create Hardware (HUNCH) Program Participation with Volusia County Schools	3/7/2019	3/7/2024	Non-Reimbursable	\$70,444	KSC	KCA-4591 Rev Basic
680	29174	Lake Technical College	KCA-4590, Nonreimbursable SAA between NASA, KSC and Lake Technical College for High School Students United with NASA to Create Hardware (HUNCH) Program Participation with Lake Technical College (LTC)	3/15/2019	3/15/2024	Non-Reimbursable	\$67,904	KSC	KCA-4590 Rev Basic

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681 29094	UNITED LAUNCH ALLIANCE,	Annex No. 11 to Fully Reimbursable SAA between United Launch Alliance, LLC and NASA for Use of Center Capabilities	9/13/2018	2/21/2023	Reimbursable		KSC	KCA-4556-11 Rev Basic
682 29093	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 11 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities		9/30/2022	Reimbursable		KSC	KCA-4513-11 Rev Basic
683 29072	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 9 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities		11/17/2022	Reimbursable		KSC	KCA-4513-9 Rev Basic
684 29049	UNITED LAUNCH ALLIANCE,	Annex No. 7 to Fully Reimbursable SAA between United Launch Alliance, LLC and NASA for Use of Center Capabilities	9/11/2018	2/21/2023	Reimbursable		KSC	KCA-4556-7 Rev Basic
685 28929	ORBITAL ATK, INC	Annex No. 1 to Reimbursable Umbrella SAA between KSC and Orbital Sciences Corporation for Use of Center Capabilities	8/23/2018	8/23/2023	Reimbursable		KSC	KCA-4500-1 Rev Basic

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686 28928	ORBITAL ATK, INC	Reimbursable Umbrella SAA between KSC and Orbital Sciences Corporation for Use of Center Capabilities	8/23/2018	8/23/2023	Reimbursable		KSC	KCA-4500 Rev Basic
687 28870	THE BOEING COMPANY	Annex No. 1 to Reimbursable Umbrella SAA between NASA KSC and The Boeing Company for Use of Center Capabilities	8/21/2018	8/21/2023	Reimbursable		KSC	KCA-4515-1 Rev Basic
688 28869	THE BOEING COMPANY	Reimbursable Umbrella SAA between NASA KSC and The Boeing Company for Use of Center Capabilities	8/21/2018	8/21/2023	Reimbursable		KSC	KCA-4515 Rev Basic
689 28819	Polk State College	Nonreimbursable SAA between NASA and Polk State College for High School Students United with NASA to Create Hardware (HUNCH) Program Participation	8/6/2018	8/6/2023	Non-Reimbursable	\$57,191	KSC	KCA-4582 Rev Basic
690 27999	SPACE FLORIDA, AN INDEPENDENT SPECIAL DISTRICT OF THE STATE OF FLORIDA	Annex No.8 to Reimbursable Space Act Agreement with Space Florida for Use of Center Capabilities	4/18/2018	12/14/2022	Reimbursable		KSC	KCA-4548-8 Rev Basic

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691	27912	University of Florida	Annex No. 1 to Development of Biological Imaging Systems for Growth, Biological Assessment of Flight Hardware and Space Biology Studies in Space relevant Environments with University of Florida (KCA-4572-1)		11/14/2023	Non-Reimbursable	\$129,077	KSC	KCA-4572-1 Rev Basic
692	27911	University of Florida	Nonreimburseable Space Act Agreement for Collaborative Research, Technology Transfer, Academic Engagement, and Outreach Activities	11/14/2018	11/14/2023	Non-Reimbursable	\$0	KSC	KCA-4572 Rev Basic
693	7/6/4	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 10 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities	2/23/2018	11/17/2022	Reimbursable		KSC	KCA-4513-10 Rev Basic
694	27641	ASRC Federal Data Solutions	Fully Reimbursable Umbrella SAA between NASA and ASRC Federal Data Solutions for C3PW	2/26/2018	9/30/2021	Reimbursable		KSC	KCA-4559 Rev Basic
695	1 / / h KU	UNITED LAUNCH ALLIANCE, LLC	Annex No. 1 to Fully Reimbursable SAA between United Launch Alliance, LLC and NASA for Use of Center Capabilities	2/22/2018	2/22/2023	Reimbursable		KSC	KCA-4556-1 Rev Basic

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
696 27632	UNITED LAUNCH ALLIANCE,	Fully Reimbursable SAA between United Launch Alliance, LLC and NASA for Use of Center Capabilities	2/22/2018	2/22/2023	Reimbursable		KSC	KCA-4556 Rev Basic
697 27587	DISTRICT OF THE STATE OF	Annex No. 3 to Reimbursable Space Act Agreement with Space Florida for Use of Center Capabilities	2/19/2018	12/14/2022	Reimbursable		KSC	KCA-4548-3 Rev Basic
698 27565	DISTRICT OF THE STATE OF	Annex No. 5 to Reimbursable Space Act Agreement with Space Florida for Use of Center Capabilities	2/13/2018	12/14/2022	Reimbursable		KSC	KCA-4548-5 Rev Basic
699 27564	DISTRICT OF THE STATE OF	Annex No. 4 to Reimbursable Space Act Agreement with Space Florida for Use of Center Capabilities	2/13/2018	12/14/2022	Reimbursable		KSC	KCA-4548-4 Rev Basic
700 27509	DISTRICT OF THE STATE OF	Annex No 9 to Reimbursable Space Act Agreement with Space Florida for Use of Center Capabilities	1/18/2018	12/14/2022	Reimbursable		KSC	KCA-4548-9 Rev Basic

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
701 27507	DISTRICT OF THE STATE OF	Annex No. 6 to Reimbursable Space Act Agreement with Space Florida for Use of Center Capabilities	1/18/2018	12/14/2022	Reimbursable		KSC	KCA-4548-6 Rev Basic
702 27506	DISTRICT OF THE STATE OF	Annex No. 2 to Reimbursable Space Act Agreement with Space Florida for Use of Center Capabilities	1/18/2018	12/14/2022	Reimbursable		KSC	KCA-4548-2 Rev Basic
703 27290		Reimbursable Umbrella SAA between KSC and University of Dayton for Corrosion Testing	12/22/2017	12/22/2022	Reimbursable		KSC	KCA-4550 Rev Basic
704 27258	INDEPENDENT SPECIAL DISTRICT OF THE STATE OF	Annex No. 1 to Reimbursable Space Act Agreement with Space Florida for Use of Center Capabilities (Utilities, Operations, and Integration Support)	12/15/2017	12/14/2022	Reimbursable		KSC	KCA-4548-1 Rev Basic
705 27257		Reimbursable Space Act Agreement with Space Florida for Use of Center Capabilities	12/14/2017	12/14/2022	Reimbursable		KSC	KCA-4548 Rev Basic

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CHNIER	CENTER TRACKING NUMBER (IF ANY)
706 26866	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 8 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities		9/30/2022	Reimbursable		KSC	KCA-4513-8 Rev Basic
707 26865	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 7 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities		9/30/2022	Reimbursable		KSC	KCA-4513-7 Rev Basic
708 26861	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 6 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities		9/30/2022	Reimbursable		KSC	KCA-4513-6 Rev Basic
709 26860	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 5 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities		9/30/2022	Reimbursable		KSC	KCA-4513-5 Rev Basic
710 26859	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 4 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities		9/30/2022	Reimbursable		KSC	KCA-4513-4 Rev Basic

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE SIGNAT	TURE DATE EXPIRAT	ON DATE TYPE OF AGE	REEMENT TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
711	26858	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 3 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities	17 9/30/2022	Reimbursable		KSC k	(CA-4513-3 Rev Basic
712	1/hxh/	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 2 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities	17 9/30/2022	Reimbursable		KSC k	(CA-4513-2 Rev Basic
713	I /hxhh	SPACE EXPLORATION TECHNOLOGIES CORP	Annex No. 1 to Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities	017 11/17/202	2 Reimbursable		KSC K	(CA-4513-1 Rev Basic
714	26855	SPACE EXPLORATION TECHNOLOGIES CORP	Fully Reimbursable Space Act Umbrella Agreement between NASA and Space Exploration Technologies Corporation for Use of Kennedy Space Center Capabilities	017 11/17/202	2 Reimbursable		KSC k	(CA-4513 Rev Basic
715	26738	Valencia College	Nonreimbursable SAA between NASA and Valencia College for High School Students United with NASA to Create Hardware (HUNCH) Program Participation	7 9/7/2022	Non-Reimburs	able \$227,557	KSC K	(CA-4528 Rev Basic

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
716	26245	PPG Industries, Inc	Reimbursable SAA between NASA and PPG Industries, Inc for PPG Coatings Agreement	12/20/2017	12/19/2021	Reimbursable		KSC	KCA-4554 Rev Basic
717	25982	Canaveral Council of Technical Societies	Nonreimbursable Space Act Agreement with CCTS for the Collaboration on the Annual Space Congress Event		6/14/2022	Non-Reimbursable	\$162,020	KSC	KCA-4526
718	25967	RUAG Space USA, Inc	Reimbursable Umbrella SAA with RUAG SPACE USA, INC for NASA Testing Services	9/21/2017	9/21/2022	Reimbursable		KSC	KCA-4544
719	25544	University of Puerto Rico	Nonreimbursable Agreement between NASA and Univ Puerto Rico for NASA Educator Resource Center		7/13/2022	Non-Reimbursable	\$19,888	KSC	KCA-4529 Rev Basic
720	24702		Property Agreement between NASA KSC and SpaceX for the Use of Launch Complex 39 Pad A	4/14/2014	4/14/2034			KSC	KCA-4360 Rev Basic

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
721 24609	SEMINOLE COUNTY PUBLIC SCHOOLS	KCA-4517, Nonreimbursable SAA between NASA KSC and the School Board of Seminole County, FL for High School Students United with NASA to Create Hardware (HUNCH) Program Participation	10/19/2017	10/19/2022	Non-Reimbursable	\$277,277	KSC	KCA-4517
722 24385	Blue Origin, LLC	Fully Reimbursable SAA between Blue Origin, LLC and NASA for Use of Center Capabilities	3/27/2017	3/27/2022	Reimbursable		KSC	KCA-4514
723 24320	Broyard County Public Schools	Nonreimbursable SAA between NASA and High School Students United to Create Hardware (HUNCH) Prorgram Participation (Brevard County)	4/21/2017	4/21/2022	Non-Reimbursable	\$539,103	KSC	KCA-4518
724 23983	Blue Origin	Nonreimbursable SAA between NASA and Blue Origin for Commercial Space Capabilities Collabortion	4/15/2016	9/30/2021	Non-Reimbursable	\$248,453	KSC	KCA-4502 Rev. Basic
725 23737	Thomas	Nonreimbursable SAA between University of the VI St. Thomas and NASA for Regional Educator Resource Center	4/19/2017	4/19/2022	Non-Reimbursable	\$45,844	KSC	KCA-4498

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	I A DE CIE V(EBEEMENI	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
726		UNIVERSITY OF SOUTH FLORIDA	Nonreimbursable SAA Umbrella Agreement between NASA KSC and University of South Florida for Collaborative Research	9/9/2016	9/9/2021	Non-Reimbursable	\$0	KSC	KCA-4486 Rev Basic
727	20723	Space Florida	Property Agreement between NASA KSC and Space Florida for The Transfer of Operations and Management of the Shuttle Landing Facility	6/22/2015	6/22/2045	Reimbursable		KSC	KCA-4412
728	15983	Air Liquide Large Industries U.S. LP	Grant of Easement for Right of Way for Air Liquide Large Industries U.S. LP	7/25/2013	7/25/2023	Non-Reimbursable		KSC	KCA-4400 Rev Basic
729	14880	Sierra Nevada Corporation	Space Act Agreement between NASA and Sierra Nevada Corporation for Commercial Crew Integrated Capability (CCiCap)	8/2/2012	8/1/2022	Funded	\$227,500,000	KSC	NNK12MS03S
730	10940	Space Florida, an independent special district of the state of Florida	Real Property Use Permit between NASA KSC and Space Florida for the Use of the Orbiter Processing Facility 3, The Space Shuttle Main Engine Processing Facility, and the Processing Control Center		6/1/2027	Reimbursable		KSC	KCA-4311

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731	10479	UNITED LAUNCH ALLIANCE, LLC	SAA between United Launch Alliance and NASA Launch Services Program for Access to and Operational Use of Space Launch Complex 2 (SLC-2) and Delta II Launch Vehicle Government Owned Equipment	8/23/2011	12/31/2027	Reimbursable		KSC	KCA-4333
732	7016	Florida Power & Light Company	Grant of Easement for Right of Way for Electric Power Transmission and Communications Facilities to Florida Power & Light Company	11/6/2009	11/6/2034	Non-Reimbursable		KSC	KCA-4250 Rev Basic
733	3798	SPACE FLORIDA, AN INDEPENDENT SPECIAL DISTRICT OF THE STATE OF FLORIDA	REAL PROPERTY USE PERMIT BETWEEN NASA AND SPACEPORT FLORIDA AUTHORITY FOR DESIGN, CONSTRUCTION, AND OPERATION OF SERPL	2/8/2001	10/3/2033	Reimbursable		KSC	KCA-1683-BASIC
734	3786	Florida Space Authority	USE PERMIT FOR DESIGN, CONSTRUCTION & ACTIVATION OF A FLIGHT VEHICLE FACILITY AT TOWWAY SITE	11/1/1999	12/31/9999	Non-Reimbursable		KSC	KCA-1487-BASIC
735	34377	Old Dominion University	Visual Attention Allocation and Trust in Human-Autonomy Teaming	5/3/2021	5/3/2026	Non-Reimbursable	\$527,701	LaRC	SAA1-34376, Annex 1

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
736	34376	Old Dominion University	Collaboration Research, Development, and Testing	5/3/2021	5/3/2026	Non-Reimbursable	\$0	LaRC	SAA1-34376
737	34374	Honeywell International, Inc.	Acoustic Liner Tests	4/30/2021	4/30/2022	Reimbursable		LaRC	
738	34369	UNIVERSITY OF WYOMING	Validation and Verification of Unsteady Pressure Measurement Technology	4/28/2021	11/30/2021	Non-Reimbursable	\$25,710	LaRC	SAA1-34369
739	34298	Lehigh University	Mentoring for University Technical Entrepreneurship Program	4/28/2021	4/28/2023	Non-Reimbursable	\$5,371	LaRC	SAA1-34298
740	34288	Arizona State University	Investigation of Bio-Inspired Material Surfaces for Dust Mitigation in Space Applications	4/5/2021	4/5/2024	Non-Reimbursable	\$16,910	LaRC	SAA1-34287, Annex 1

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
741	34287	Arizona State University	Collaborative Aerospace Research and Outreach	4/5/2021	4/5/2026	Non-Reimbursable	\$0	LaRC	SAA1-34287
742	34273	The Longhow Group, LLC	Beyond Visual Line Of Sight (BVLOS) UAS Flight Corridor Development for Advanced Air Mobility (AAM) High Density Vertiplex Flight Test	4/12/2021	3/12/2022	Non-Reimbursable	\$92,416	LaRC	SAA1-34272, Annex 1
743	34272	The Longbow Group, LLC	Unmanned Systems Collaborative testing at Fort Monroe	4/12/2021	4/12/2026	Non-Reimbursable	\$0	LaRC	SAA1-34272
744	34230	Blue Origin, LLC	Terathertz Scanning Application for Blue Origin	5/12/2021	2/12/2022	Reimbursable		LaRC	SAA1-34230
745	1 3/1 / / /	THE REGENTS OF THE UNIVERSITY OF MICHIGAN	Collaborative Research on Model Fusion for Efficient Uncertainty Quantification	4/15/2021	4/15/2022	Non-Reimbursable	\$7,151	LaRC	SAA1-34227

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746	34215	Stevens Institute of Technology	Boundary Layer Measurements with Advanced Diagnostics	5/3/2021	9/30/2023	Non-Reimbursable	\$265,000	LaRC	SAA1-34215
747	33846	THE BOEING COMPANY	Integration, Demonstration and Evaluation of Autonomous Systems and Tools	4/19/2021	2/3/2022	Non-Reimbursable	\$285,804	LaRC	SAA1-23831, Annex 16
748	33816	Aerion Corporation	High Mach Aircraft Research, Development and Collaboration	1/19/2021	9/30/2022	Non-Reimbursable	\$530,716	LaRC	SAA1-33813, Annex 1
749	33813	Aerion Corporation	Aerospace Research Development and Collaboration	1/19/2021	1/19/2026	Non-Reimbursable	\$0	LaRC	SAA1-33813
750	33748	The Boeing Company	Laser Ablation to Improve Adhesive Bonding of Aerospace Structural Thermoplastic Composite Materials		2/3/2022	Non-Reimbursable	\$43,730	LaRC	SAA1-33748

	AM ID JMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
751 333	359	LOCKHEED MARTIN	Heat Pipe Cooled Forebody Demonstrator	9/24/2020	9/24/2021	Reimbursable		LaRC	SAA1-28174, Annex 2
752 333	356		HYMETS TESTING USING REMOTE SPECTRAL SENSORS	1/4/2021	9/30/2021	Reimbursable		LaRC	SAA1-33356
753 333	3329		Investigation of Novel Usage of Embedded High Resistance Caps	9/15/2020	6/15/2022	Non-Reimbursable	\$18,976	LaRC	SAA1-33328, Annex 1
754 333	3328		Investigation of Manufacturing Techniques for Novel Acoustic Liners	9/15/2020	9/15/2025	Non-Reimbursable	\$0	LaRC	SAA1-33328
755 333	3323	The Governors School for Science and Technology	STEM Education Collaboration	9/24/2020	9/24/2023	Non-Reimbursable	\$49,366	LaRC	SAA1-33323

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756	33217	UNIVERSITY OF NOTRE DAME	Cone-Traverse Study and testing in the Langley Aerothermodynamics Laboratory	11/12/2020	9/30/2022	Non-Reimbursable	\$242,218	LaRC	SAA1-33217
757	33115	National Institute of Aerospace	LABORATORY AND FACILITY USE FOR BNNT RESEARCH	10/1/2020	9/30/2021	Reimbursable		LaRC	SAA1-31764, Annex 3
758	32988	Texas A&M University	System-Wide Safety Research in Advanced Air Mobility (AAM)	3/16/2021	3/16/2026	Non-Reimbursable	\$328,412	LaRC	SAA1-32987, Annex 1
759	32987	Texas A&M University	Advanced Air Mobility Research and Testing	3/16/2021	3/16/2026	Non-Reimbursable	\$0	LaRC	SAA1-32987
760	32960	SPECTRAL ENERGIES, LLC (SE)	High-Speed, Noninvasive, Multi-Parameter Laser Diagnostics for Transonic Flows	7/22/2020	7/22/2022	Non-Reimbursable	\$66,615	LaRC	SAA1-32960

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761	32894	Techmer PM	Evaluation of Lunar Dust Simulant Adhesion on Advanced Commercial Materials	9/15/2020	5/15/2022	Non-Reimbursable	\$14,416	LaRC	SAA1-32894
762	32878	Psionic, LLC	Psionic Engineering Test Unit (ETU) Navigation Doppler Lidar (NDL) 2020	7/17/2020	12/1/2021	Reimbursable		LaRC	SAA1-23647, Annex 5
763	32810	IKONICS Corporation	Evaluation of Facesheets with Variable Geometry	8/13/2020	2/12/2022	Non-Reimbursable	\$6,226	LaRC	SAA1-32809, Annex 1
764	32809	IKONICS Corporation	Investigation of Liner Facesheet Manufacturing Innovations	8/13/2020	8/12/2025	Non-Reimbursable	\$0	LaRC	SAA1-32809
765	32793	Radford University	NASA's Modeling and Simulation-Based Educator Professional Development (EPD) Workshop for High School Mathematics	8/3/2020	8/3/2021	Non-Reimbursable	\$23,513	LaRC	SAA1-32792, Annex 1

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766	32792	Radford University	Collaboration between NASA and Radford University's Modeling and Simulation Institute	8/3/2020	8/3/2025	Non-Reimbursable	\$0	LaRC	SAA1-32792
767	32735	National Institute of Aerospace	Transition Prediction and Control for Blunt Hypersonic Configurations with Hemispherical and Ogival Nosetips	7/22/2020	3/31/2023	Reimbursable		LaRC	SAA1-31764, ANNEX 2
768	32708	Lockheed Martin	Free-Spin Test in the NASA LaRC Vertical Spin Tunnel	4/12/2021	4/12/2022	Reimbursable		LaRC	SAA1-32707, Annex 1
769	32707	Lockheed Martin	Wind Tunnel Testing	4/12/2021	4/12/2026	Reimbursable		LaRC	SAA1-32707
770	32700	Worcester Polytechnic Institute	Research Collaboration between Worcester Polytechnic Institute and NASA Langley Research Center		7/20/2025	Non-Reimbursable	\$65,084	LaRC	SAA1-32700

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771	32663	Mississippi State University	Stitched/Resin-Infused Composites Material Characterization and Sub-Component Development		6/20/2022	Non-Reimbursable	\$216,363	LaRC	SAA1-32662, Annex 1
772	32662	Mississippi State University	Cooperative Stitched Composite Structures Development and Characterization	10/2/2020	10/2/2025	Non-Reimbursable	\$0	LaRC	SAA1-32662
773	32651	JOHNS HOPKINS UNIVERSITY / APPLIED PHYSICS LAB	Dynamic Balance Proof of Concept Study	9/3/2020	9/30/2022	Non-Reimbursable	\$270,898	LaRC	SAA1-32651
774	32644	University of California San Diego	Investigation of bulk metallic glass materials for space applications	11/17/2020	11/17/2022	Non-Reimbursable	\$9,016	LaRC	SAA1-32643-ANNEX 1
775	32643	University of California San Diego	COLLABORATIVE AEROSPACE RESEARCH AND OUTREACH	11/17/2020	11/17/2025	Non-Reimbursable	\$0	LaRC	SAA1-32643

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776	32615	STRATOLAUNCH SYSTEMS CORP	STRATOLAUNCH TESTING IN THE UNITARY PLAN WIND TUNNEL	8/21/2020	12/6/2021	Reimbursable		LaRC	SAA2-403221, Annex 6
777	32602	Purdue University	Investigation of Wear-Resistant Materials for Space Applications	7/16/2020	7/16/2022	Non-Reimbursable	\$9,016	LaRC	SAA1-32601-ANNEX 1
778	32601	Purdue University	COLLABORATIVE AEROSPACE RESEARCH AND OUTREACH	7/16/2020	7/16/2025	Non-Reimbursable	\$0	LaRC	SAA1-32601
779	32576	Carnegie Mellon University	Carnegie Melon University (CMU) Collaboration with NASA LaRC on the Research and Development of the Qualification of Additively Manufactured Parts	7/13/2020	7/13/2025	Non-Reimbursable	\$675,579	LaRC	SAA1-32576
780		UNIVERSITY OF NORTH DAKOTA	Investigation of Novel Wear-Resistant Materials for Space Applications	7/24/2020	7/24/2023	Non-Reimbursable	\$39,258	LaRC	SAA1-32507

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781		UNIVERSITY OF NORTH DAKOTA	Collaborative Aerospace and Resarch	7/24/2020	7/24/2025	Non-Reimbursable	\$0	LaRC	SAA1-32507
782	32502	BLUE ORIGIN, LLC	Buffet Pressure Database Development	7/9/2020	9/30/2021	Reimbursable		LaRC	SAA1-32502
783		L3HARRIS TECHNOLOGIES, INC.	Antenna Radar Cross Section Testing	12/15/2020	9/30/2021	Reimbursable		LaRC	SAA1-32449, ANNEX 1
784	32449	L3HARRIS TECHNOLOGIES, INC.	Aerospace Research Development Testing and Evaluation Support	12/15/2020	12/15/2025	Reimbursable		LaRC	SAA1-32449
785	32389	Innoveering, LLC	Mach Sensor Testing in the Arc-Heated Scramjet Test Facility	8/12/2020	9/30/2021	Non-Reimbursable	\$102,709	LaRC	SAA1-32389

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786		Rosemount Aerospace - Collins Aerospace	SUPPORT FOR NASA TRAFFIC AWARE STRATEGIC AIRCREW REQUEST (TASAR) SOFTWARE	8/25/2020	8/25/2021	Reimbursable		LaRC	SAA1-32352
787		THE UNIVERSITY OF TEXAS AT SAN ANTONIO	Shock Wave Boundary Layer Interactions	11/19/2020	9/30/2021	Non-Reimbursable	\$328,711	LaRC	SAA1-32320
788	32298	THE VIRGINIA AIR AND SPACE CENTER AND CITY OF HAMPTON	A Joint Public Lecture Series Entitled The Sigma Series	7/30/2020	7/30/2025	Non-Reimbursable	\$105,598	LaRC	SAA1-32298
789	32297	The Boeing Company	Advancement of Acoustic Lining Design Methods and Tools	3/4/2021	9/30/2022	Non-Reimbursable	\$26,433	LaRC	SAA1-23831, ANNEX 15
790	32296	The Boeing Company	Flight Test of B737MAX-9	6/2/2021	9/30/2023	Non-Reimbursable	\$13,010	LaRC	SAA1-23831, Annex 14

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791	32252	Blue Origin, LLC	Provide Forced Oscillation Testing in Transonic Dynamics Tunnel for the Blue Origin Crew Capsule	11/4/2020	8/31/2022	Reimbursable		LaRC	SAA2-403403, Annex 2
792	32177	BLUE ORIGIN, LLC	COLLABORATION ON SYSTEMS ENGINEERING PROCESSES FOR VERIFICATION AND VALIDATION OF LAUNCH VEHICLE REQUIREMENTS	4/23/2020	10/31/2021	Non-Reimbursable	\$175,117	LaRC	SAA1-32177
793	1371hh	VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY	Air Quality Monitoring Site	8/13/2020	8/13/2025	Non-Reimbursable	\$47,380	LaRC	IA1-32166
794	32151	The Boeing Company	Shape Memory Alloy Remote Control Actuation Test, Phase 3	1/12/2021	1/12/2022	Non-Reimbursable	\$218,628	LaRC	SAA1-32151
795	32044	National Institute for Aviation Research-Wichita State University (niar)	Composites NDE standards library and database administration	4/24/2020	4/24/2025	Non-Reimbursable	\$23,548	LaRC	SAA1-32044

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
796	32037	Hermeus Corporation	High Mach Aircraft Research and Development Collaboration	11/9/2020	11/9/2025	Non-Reimbursable	\$540,705	LaRC	SAA1-32036
797	32036	Hermeus Corporation	Collaboration for Aerospace Research, Development and Testing	11/9/2020	11/9/2025	Non-Reimbursable	\$0	LaRC	SAA1-32036
798	31974	TEXAS A&M UNIVERSITY	Boundary Layer Turbulence (BOLT) Flight II Experiments	4/23/2021	9/30/2022	Non-Reimbursable	\$256,604	LaRC	SAA1-31974
799	31765	National Institute of Aerospace	Novel Concepts for Transition Delay in Hypersonic Boundary Layers Support	7/17/2020	3/31/2023	Reimbursable		LaRC	SAA1-31764, Annex 1
800	31764	National Institute of Aerospace	RESEARCH, EDUCATIONAL OUTREACH, AND TESTING ACTIVITIES	7/17/2020	7/17/2025	Reimbursable		LaRC	SAA1-31764

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
801	31663		Collaboration to Commercialize High Mach Aircraft	3/20/2020	3/20/2025	Non-Reimbursable	\$0	LaRC	SAA1-31663
802	31490		SKYRANGE CAPABILITY DEVELOPMENT, DEMONSTRATION AND TRANSITION TO UNITED STATES AIR FORCE		4/21/2022	Reimbursable		LaRC	IA1-24848, Annex 5
803	31475	The Boeing Company	Automated Fiber Placement Simulation Tool Development	4/9/2020	8/31/2021	Non-Reimbursable	\$199,503	LaRC	SAA1-31475
804	31409	ASX Composites	Co-Cure-Ply Materials Development	11/26/2019	9/30/2021	Non-Reimbursable	\$123,983	LaRC	SAA1-31409
805	31340	Lockheed Martin	Advanced Additive Manufacturing Technologies	12/10/2019	12/10/2021	Non-Reimbursable	\$11,917	LaRC	SAA1-31340

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
806	31252		Wind Tunnel Testing of Pressure Sensitive Paint	11/12/2019	5/31/2023	Non-Reimbursable	\$92,816	LaRC	SAA1-23398, Annex 5
807		GENERAL ATOMICS AERONAUTICAL SYSTEMS, INC.	Evaluation of Acoustic Liners for Fan Noise Reduction	10/9/2019	10/9/2024	Reimbursable		LaRC	SAA1-31140
808	31071	Genetoo, Inc.	Laser Surface Treatment and Analysis of Metal Alloys for Adhesion Mitigation	9/30/2019	12/31/2021	Non-Reimbursable	\$87,711	LaRC	SAA1-31071
809	31038	The Boeing Company	annex to AEROSPACE RESEARCH AND DEVELOPMENT	10/22/2019	12/31/2021	Reimbursable		LaRC	SAA1-21619, Annex 6
810	30948	Honda Aircraft Company LLC	Honda Aircraft Company Wind Tunnel Testing	9/5/2019	9/5/2022	Reimbursable		LaRC	SAA1-30948

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
811	30865	Purdue University	Hypersonic Boundary Layer Cone Fin and Cone Flap Studies	3/23/2020	9/30/2021	Non-Reimbursable	\$357,283	LaRC	SAA1-25183, Annex 2
812	30776	University of Maryland	Support of Fluid-Structure Interactions Testing, Part 2, in LaRC 20-Inch Mach 6 Tunnel	12/5/2019	1/31/2022	Non-Reimbursable	\$164,703	LaRC	SAA1-25454, Annex 3
813	30707	MOOG, INC	Autonomous Flight Control Development for Electric VTOL Vehicles	1/18/2020	1/18/2025	Non-Reimbursable	\$124,163	LaRC	SAA1-30706
814	30706	MOOG, INC	AEROSPACE RESEARCH TECHNOLOGY AND DEVELOPMENT	1/18/2020	1/18/2025	Non-Reimbursable	\$0	LaRC	SAA1-30706
815	1 31 Ib 3X	NORTH CAROLINA STATE UNIVERSITY	HIGH-FIDELITY MODEL DEVOPMENT FOR SCRAMJET COMBUSTOR FLOWPATHS	8/12/2019	5/31/2023	Non-Reimbursable	\$75,603	LaRC	SAA1-23398, Annex 4

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
816	30606	BNNT, LLC	DEVELOPMENT AND OPTIMIZATION OF BORON NITRIDE NANOTUBES	8/21/2019	8/21/2024	Non-Reimbursable	\$0	LaRC	SAA1-30606
817	30581	The Boeing Company	Unique CFD Validation Data Using the High Lift Common Research Model (CRM-HL) from the Qinetiq 5M Wind Tunnel	8/12/2019	8/12/2021	Non-Reimbursable	\$184,193	LaRC	SAA1-23831, Annex 12
818	30465	The Boeing Company	Flight Evaluation of NASA Langleys Safeguard Technology	5/4/2020	5/4/2022	Non-Reimbursable	\$46,272	LaRC	SAA1-23831, Annex 11
819	30237	HRL Laboratories, LLC	Evaluation of Aerospace Coatings for Mitigation of Environmental Contaminants	9/30/2019	9/30/2022	Reimbursable		LaRC	SAA1-30237
820	30164	SIKORSKY AIRCRAFT CORP	Stroking Main Rotor Gearbox and Lower Fuselage Gun Mount Drop Test	9/17/2019	8/31/2021	Reimbursable		LaRC	SAA1-30164

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
821	29851	Exothermics, Inc.	Thermochemical Response of UHT Hypersonic Leading-Edge Candidates	3/26/2019	9/30/2021	Reimbursable		LaRC	SAA1-29851
822	29737	Florida State University	Validation of a Liner Drag Measurement/Computational Tool	3/19/2019	1/1/2022	Non-Reimbursable	\$14,020	LaRC	SAA129737
823		Calspan-University at Buffalo Research Center	FREESTREAM MEASUREMENT TESTING	3/6/2019	9/30/2021	Non-Reimbursable	\$2,256	LaRC	SAA1-29707
824	29424	Williamsburg-James City County Public Schools	High School Students United With NASA to Create Hardware Program	2/6/2019	2/6/2024	Non-Reimbursable	\$0	LaRC	SAA1-29424
825	29215	Purdue University	Deployable Composite Sail Structure Materials Modeling Research	2/22/2019	9/30/2023	Non-Reimbursable	\$15,826	LaRC	SAA1-29213, Annex 2

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
826	29213	Purdue University	Deployable Composite Solar Sail Structural Research	2/21/2019	2/21/2024	Non-Reimbursable	\$0	LaRC	SAA1-29213
827	28808	The Boeing Company	The Development of a Science, Technology, Engineering and Mathematics Capable Workforce		11/21/2021	Non-Reimbursable	\$540,068	LaRC	SAA1-28808
828	28789	Wichita State University	Acoustic and Aero Liner Research	10/1/2018	10/1/2023	Non-Reimbursable	\$0	LaRC	SAA1-28789
829	28502	North Carolina State University	Deployable Composite Booms and Deployment Systems	8/27/2018	5/31/2023	Non-Reimbursable	\$52,604	LaRC	SAA1-23398, Annex 3
830	28174	LOCKHEED MARTIN	Revolutionary Fabrication Methods and Materials Testing of Advanced Materials	7/17/2018	7/17/2023	Reimbursable		LaRC	SAA1-28174

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
831	27921	Tech Center LLC	Cooperative Research Activities In Manufacturing Technologies	7/13/2018	7/13/2023	Reimbursable		LaRC	SAA1-27921
832	27829	Boom Supersonic	Aerospace Research and Development	5/8/2018	5/8/2023	Reimbursable		LaRC	SAA1-27829
833	27785	George Mason University	Interatomic Potential Development for Molecular Dynamics Simulations	5/31/2018	5/31/2023	Non-Reimbursable	\$278,363	LaRC	SAA1-27785
834	27263	BLACK LABORATORIES, LLC	Materials Characterization	4/18/2018	4/18/2022	Reimbursable		LaRC	SAA1-27263
835		Hyperloop Transportation Technologies	Research, Development, and Testing of Aerospace Technologies	1/30/2018	1/30/2023	Reimbursable		LaRC	26728

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
836	26344	ALASKA AIRLINES	Research and Development Collaboration	9/25/2017	9/25/2022	Non-Reimbursable	\$0	LaRC	SAA1-26344
837	25717	PPG Industries, Inc.	Research Toward Aerospace Coatings for Mitigation of Environmental Contaminants	9/21/2017	6/30/2021	Non-Reimbursable	\$43,068	LaRC	SAA1-25717
838	25551		Multifunctional Hypersonic Materials and Coatings	5/10/2017	12/31/2021	Reimbursable		LaRC	SAA1-25551
839	25454	University of Maryland	Hypersonic ShockWave Boundary Layer Fluid Structure Intereactions Technology Development	6/1/2017	6/1/2022	Non-Reimbursable	\$0	LaRC	SAA1-25454
840	25384		ADVANCED CAPABILITIES FOR AERONAUTICS RESEARCH AND GROUND FACILITY TESTING	11/13/2017	11/13/2022	Non-Reimbursable	\$273,295	LaRC	SAA1-25384

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
841	25183	Purdue University	Support of Understanding of Experimental Mach 6 Hypersonic Boundary Layers (BL)	7/19/2017	7/19/2022	Non-Reimbursable	\$0	LaRC	SAA1-25183
842	24848		Hypersonic Test and Technology Development	4/21/2017	4/21/2022	Reimbursable		LaRC	IA1-24848
843	24799	Johns Hopkins University	Discovery to Market Project	1/24/2017	6/30/2021	Non-Reimbursable	\$11,697	LaRC	SAA1-24799
844	24738	Gulfstream AerospaceCorporation	Aeroacoustic Research Activities	2/3/2017	2/3/2022	Non-Reimbursable	\$0	LaRC	SAA1-24738
845	24391		High School Students United with NASA to Create Hardware (HUNCH) Program	12/2/2016	12/2/2021	Non-Reimbursable	\$0	LaRC	SAA1-24391

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
846	24387	York County School District	High School Students United with NASA to Create Hardware (HUNCH) Program	11/29/2016	11/29/2021	Non-Reimbursable	\$0	LaRC	SAA1-24387
847		North Carolina School of Science & Math	High School Students United with NASA to Create Hardware (HUNCH) Program	11/15/2016	11/15/2021	Non-Reimbursable	\$0	LaRC	SAA1-24364
848		Gloucester County Public School District	High School Students United with NASA to Create Hardware (HUNCH) Program	12/6/2016	12/6/2021	Non-Reimbursable	\$0	LaRC	SAA1-24362
849	24257	Hampton City Schools	High School Students United with NASA to Create Hardware (HUNCH) Program	10/21/2016	10/21/2021	Non-Reimbursable	\$0	LaRC	SAA1-24257
850		New Horizons Regional Education Center	High School Students United with NASA to Create Hardware (HUNCH) Program	10/17/2016	10/17/2021	Non-Reimbursable	\$0	LaRC	SAA1-24239

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
851	24186	Fayetteville State University	COLLABORATIVE AEROSPACE RESEARCH, DEVELOPMENT, AND TESTING OPPORTUNITIES	12/15/2016	12/15/2021	Non-Reimbursable	\$0	LaRC	SAA1-24186
852	24122	University of Washington	Technical Interchange on Applications of Data Analytics and Machine Learning in Aerospace Domains	12/5/2016	12/5/2021	Non-Reimbursable	\$0	LaRC	SAA1-24122
853	24034	The Boeing Company	Flight Deck Systems and Operations Research	1/20/2017	1/20/2022	Non-Reimbursable	\$816,127	LaRC	SAA1-24034
854	24017	Textron Aviation, Inc.	Laboratory and Flight Aeronautical Research	4/5/2017	4/5/2022	Non-Reimbursable	\$0	LaRC	SAA1-24017
855		Newport News Public School District	High School Students United with NASA to Create Hardware (HUNCH) Program	10/23/2016	10/23/2021	Non-Reimbursable	\$0	LaRC	SAA1-23957

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
856	23938	Genedge Alliance	Cooperative Research Activities in Manufacturing Technologies	10/7/2016	10/7/2021	Reimbursable		LaRC	SAA1-23938
857	23831	The Boeing Company	Aerospace Research Development	2/3/2017	2/3/2022	Non-Reimbursable	\$0	LaRC	SAA1-23831
858	23827	Tech Center LLC	Cooperative Research Activities in Manufacturing Technologies	7/5/2017	7/5/2022	Non-Reimbursable	\$0	LaRC	SAA1-23827
859	23647	Psionic, LLC	Space Technology Commercialization for Measurement and Materials Applications	12/16/2016	12/16/2021	Reimbursable		LaRC	SAA1-23647
860	23579	GenEdge Alliance	Cooperative Research Activities in Manufacturing Technologies	2/23/2017	2/23/2022	Non-Reimbursable	\$0	LaRC	SAA1-23579

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861	23461	University of Florida	Collaborative Research, Development,, and Testing	12/12/2016	12/12/2021	Non-Reimbursable	\$0	LaRC	SAA1-23461
862	23398	North Carolina State University	COLLABORATIVE AEROSPACE R ESEARCH, DEVELOPMENT, AND TESTING OPPORTUNITIES	6/20/2017	5/31/2023	Non-Reimbursable	\$0	LaRC	SAA1-23398
863		Virginia Polytechnic Institute and State University	Collaborative Research, Development, and Testing Oportunities	11/16/2016	11/16/2021	Non-Reimbursable	\$0	LaRC	SAA1-23392
864	23227	Materials Research and Design, Inc. MR&D	HIGH TEMPERATURE MATERIALS TECHNICAL SUPPORT	1/4/2017	9/30/2021	Reimbursable		LaRC	SAA1-23227
865	コンマンコロ	TEXAS A&M ENGINEERING EXPERIMENT STATION	PARTICIPATION IN COOPERATIVE RESEARCH AND DEVELOPMENT PROJECTS	11/4/2016	11/4/2021	Non-Reimbursable	\$70,317	LaRC	SAA1-23219

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
866	22925	Sierra Nevada Corporation	Engineering Services, Analysis and Testing in support of SNCs Vehicle/Technology Development	9/6/2016	9/6/2021	Reimbursable		LaRC	SAA1-22925
867	22749	Raytheon Corporation	Sensor Risk Reduction Tests	12/21/2016	12/21/2021	Reimbursable		LaRC	SAA1-22746, Annex 1
868	22746	Raytheon Corporation	Optical Remote Sensing for Space Applications in Robotics and Surveillance	12/21/2016	12/21/2021	Reimbursable		LaRC	SAA1-22746
869	22625	idoodledu	Support Of The Cubes In Space Initiative	7/22/2016	7/22/2021	Non-Reimbursable	\$30,014	LaRC	SAA1-22625
870	22217	Infrasonix-Inc	Infrasonix Stethoscope Evaluation Over Human Subjects	11/28/2017	11/28/2022	Reimbursable		LaRC	SAA1-22217

ROW PAM II NO. NUMB		TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
871 22064	Huntington Ingalls Incorporated	Manufacturing, Research and Development Activities	10/31/2016	10/31/2021	Reimbursable		LaRC	SAA1-22064
872 21619	The Boeing Company	AEROSPACE RESEARCH AND DEVELOPMENT	11/20/2015	12/31/2021	Reimbursable		LaRC	SAA1-21619
873 34695	Vivace Corporation	Vivace Corporation Demand Services	6/16/2021	6/16/2026	Reimbursable		MSFC	SAA8-2134695
874 34607	HUNTSVILLE CITY SCHOOLS	annex TO PRODUCE HARDWARE OR OTHER USEFUL PRODUCTS UNDER THE HUNCH (HIGH SCHOOLS UNITED WITH NASA TO CREATE HARDWARE) PROGRAM		6/16/2026	Non-Reimbursable	\$77,585	MSFC	SAA8-2031925.3
875 34252	Innovative Rocket Technologies Inc.	IRocket Propulsion Technology Consultation Agreement	6/7/2021	6/7/2022	Reimbursable		MSFC	SAA8-2134251.1

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
876	34251	Innovative Rocket Technologies Inc.	IROCKET Propulsion Technology	6/7/2021	6/7/2026	Reimbursable		MSFC	SAA8-2134251
877	34237	THE BOEING COMPANY	NASA MSFCMaterials Impact Testing for Boeing Research and Technology	4/27/2021	4/27/2022	Reimbursable		MSFC	SAA8-2134237
878	34231	Beau Chene High School	Beau Chene High School - Louisiana / High Schools United with NASA to Create Hardware (HUNCH) Program	3/10/2021	3/10/2026	Non-Reimbursable	\$77,585	MSFC	
879	34190	Touchstone Research Lab	Touchstone TPS Testing @HGF	4/21/2021	4/21/2022	Reimbursable		MSFC	SAA8-2134190
880	34034	Career Academies of Decatur	Career Academies of Decatur for HUNCH Program	2/2/2021	2/2/2026	Non-Reimbursable	\$77,585	MSFC	SAA8-2134034

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
881	34032	Hewitt-Trussville High School	Hewitt-Trussville High School / High Schools United with NASA to Create Hardware (HUNCH) Program		4/29/2026	Non-Reimbursable	\$77,585	MSFC	SAA8-2134032
882	33949	Brewer High School	Brewer High School for High Schools United with NASA to Create Hardware (HUNCH) Program	4/29/2021	4/29/2026	Non-Reimbursable	\$77,585	MSFC	SAA8-2133949
883	33935	THE BOEING COMPANY	Boeing XSP Composite Tank	2/11/2021	2/11/2023	Reimbursable		MSFC	SAA8-2133935
884	33819	Haigh-Farr, Inc	Haigh-Farr UHF Blade TPS Testing @HGF	12/23/2020	12/23/2021	Reimbursable		MSFC	SAA8-2033819
885	33735	Textron Systems Corporation	Textron Systems Marine and Land Systems	12/8/2020	12/8/2022	Reimbursable		MSFC	SAA8-2133735

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
886	33720	BK MANUFACTURING, INC	BK Manufacturing, Inc.	12/9/2020	12/9/2025	Reimbursable		MSFC	SAA8-2133720
887	33719	KT Engineering Corporation	annex to FASTRAC Powerpack Testing and Aerospike Nozzle Analysis in Support of USAF ARISE Program		12/22/2021	Reimbursable		MSFC	SAA8-2031673.3
888	33697	Howe Industries LLC	Testing of Propulsion Components in MSFC Test Chamber	12/14/2020	12/14/2021	Reimbursable		MSFC	SAA8-2033696.1
889	33696	Howe Industries LLC	Nuclear Thermal Propulsion System Development	12/14/2020	12/14/2025	Reimbursable		MSFC	SAA8-2033696
890	33671	Dade County Middle School	Dade County Middle School for High Schools United with NASA to Create Hardware (HUNCH) Program		1/6/2026	Non-Reimbursable	\$67,643	MSFC	SAA8-2033671

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891	33670	Dade County High School	Dade County High School for High Schools United with NASA to Create Hardware (HUNCH) Program	1/6/2021	1/6/2026	Non-Reimbursable	\$67,643	MSFC	SAA8-2033670
892	33668	Maxwell High School of Technology	Maxwell High School of Technology for High Schools United with NASA to Create Hardware (HUNCH) Program	12/14/2020	12/14/2025	Non-Reimbursable	\$67,643	MSFC	SAA8-2033668
893	33667	Franklin County High School	FRANKLIN COUNTY HIGH SCHOOL FOR HIGH SCHOOLS UNITED WITH NASA TO CREATE HARDWARE (HUNCH) PROGRAM	11/5/2020	11/5/2025	Non-Reimbursable	\$67,643	MSFC	SAA8-2033667
894	33666	McDonald County High School	MCDONALD COUNTY HIGH SCHOOL FOR HIGH SCHOOLS UNITED WITH NASA TO CREATE HARDWARE (HUNCH) PROGRAM		12/1/2025	Non-Reimbursable	\$67,643	MSFC	SAA8-2033666
895	33662	Meade County High School	MEADE COUNTY HIGH SCHOOL FOR HIGH SCHOOLS UNITED WITH NASA TO CREATE HARDWARE (HUNCH) PROGRAM	11/5/2020	11/5/2025	Non-Reimbursable	\$67,643	MSFC	SAA8-2033662

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896	33654	Mt. Pleasant High School	Mt. Pleasant High School - Tennessee / High Schools United with NASA to Create Hardware (HUNCH) Program.	12/7/2020	12/7/2025	Non-Reimbursable	\$67,643	MSFC	SAA8-2033654
897	33653	Dekalb County Technology Center	Dekalb County Technology Center for High Schools United with NASA to Create Hardware (HUNCH) Program	11/19/2020	11/19/2025	Non-Reimbursable	\$67,643	MSFC	SAA8-2033653
898	33652	Marshall County Technical School	Marshall County Technical School for High Schools United with NASA to Create Hardware (HUNCH) Program	11/30/2020	11/30/2025	Non-Reimbursable	\$67,643	MSFC	SAA8-2033652
899	33651	Laurel High School	Laurel High School for High Schools United with NASA to Create Hardware (HUNCH) Program	12/15/2020	12/15/2025	Non-Reimbursable	\$67,643	MSFC	SAA8-2033651
900	33647	Earnest Pruett Center of Technology	Earnest Pruett Center of Technology/High Schools United with NASA to Create Hardware (HUNCH) Program	3/24/2021	3/24/2026	Non-Reimbursable	\$67,643	MSFC	SAA8-2033647

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901	33646	McGavock High School	McGavock High School - Tennessee / High Schools United with NASA to Create Hardware (HUNCH) Program	3/17/2021	3/17/2026	Non-Reimbursable	\$67,643	MSFC	SAA8-2033646
902	33645	LINCOLN COUNTY HIGH SCHOOL	Lincoln County High School - Tennessee / High Schools United with NASA to Create Hardware (HUNCH) Program	11/13/2020	11/13/2025	Non-Reimbursable	\$67,643	MSFC	SAA8-2033645
903	33627	HUNTSVILLE CITY SCHOOLS	Huntsville City School for High Schools United with NASA to Create Hardware (HUNCH) Program - Jemison Annex	6/16/2021	6/16/2026	Non-Reimbursable	\$67,643	MSFC	SAA8-2031925.1
904	33577	Tellus Science Museum	Fireball Network Station at Tellus Science Museum	12/7/2020	12/7/2025	Non-Reimbursable	\$1,568	MSFC	SAA8-2033577
905	33491	Venus Aerospace Corporation	Propulsion consultation to support design of novel thrust chamber concepts	3/1/2021	3/1/2023	Reimbursable		MSFC	SAA8-2033490.1

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTED	CENTER TRACKING NUMBER (IF ANY)
906 33490		Support design, development and testing of novel cryogenic engine concepts	3/1/2021	3/1/2026	Reimbursable		MSFC	SAA8-2033490
907 33447	AST&Science, LLC	Spacecraft Component Testing	11/3/2020	11/3/2025	Reimbursable		MSFC	SAA8-2033447
908 33445	G-Space, Inc.	Thermophysical Properties Measurements of Fluoride Glass Materials	11/20/2020	11/20/2021	Reimbursable		MSFC	SAA8-2033444.1
909 33444	G-Space, Inc.	THERMOPHYSICAL PROPERTIES MEASUREMENTS USING ELECTROSTATIC LEVITATION	11/20/2020	11/20/2025	Reimbursable		MSFC	SAA8-2033444
910 33440		Lockheed Martin Spun Formed Dome Development for Lunar Habitats	11/30/2020	11/30/2021	Reimbursable		MSFC	SAA8-2033440

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
911	33257	BLUE ORIGIN, LLC	Blue Origin BE-7 10K OX TPA	11/24/2020	11/24/2022	Reimbursable		MSFC	SAA8-1725986.29
912	33230	Raytheon Missile Systems	Annex 5 to Engineering Collaboration for Impact Testing	9/10/2020	9/10/2021	Reimbursable		MSFC	SAA8-1725438.5
913	33219	BLUE ORIGIN, LLC	Blue Origin BE-7 10K LH2 TPA	11/24/2020	11/24/2022	Reimbursable		MSFC	SAA8-1725986.28
914	33206	BLUE ORIGIN, LLC	Annex 27 to Exchange of Technical Expertise for commercial space transportation	10/22/2020	4/22/2022	Reimbursable		MSFC	SAA8-1725986.27
915	33021		Design and manufacturing review for rocket engine components	10/14/2020	10/14/2022	Reimbursable		MSFC	SAA8-2033020.1

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
916	33020	RELATIVITY SPACE, INC.	Rocket Engine Development and Test	10/14/2020	10/14/2025	Reimbursable		MSFC	SAA8-2033020
917	32872	United Launch Alliance	ULA Booster Instrumentation	7/9/2020	12/31/2021	Reimbursable		MSFC	SAA8-1726580.6
918	32805	UNIVERSITY OF ALABAMA	SAA8-2132804 Annex 1 In-situ resource utilization - lunar	2/1/2021	2/1/2023	Non-Reimbursable	\$43,752	MSFC	SAA8-2132804.1
919	32804	UNIVERSITY OF ALABAMA	Space Exploration Technology Development	2/1/2021	2/1/2026	Non-Reimbursable	\$0	MSFC	SAA8-2132804
920	32789		ANALYSIS FOR ADDITIVELY MANUFACTURED SOLID ROCKET MOTOR PROPELLANT	1/19/2021	1/19/2022	Non-Reimbursable	\$36,646	MSFC	SAA8-2032788.1

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
921	32788	X-Bow Launch Systems Inc.	COLLABORATION ON ENGINEERING TECHNOLOGIES FOR EARTH, LUNAR AND SPACE APPLICATIONS	1/19/2021	1/19/2026	Non-Reimbursable	\$0	MSFC	SAA8-2032788
922	32718		The Centennial Challenges Lunar Nuitrition Challenge	8/28/2020	8/28/2022	Non-Reimbursable	\$931,482	MSFC	SAA8-2032718
923	32639	Lockheed Martin Space	Lockheed Martin Test @ HGF	6/24/2020	6/24/2022	Reimbursable		MSFC	SAA8-2032638.1
924	32638		Exchange of Technical Expertise for commercial space transportation	6/24/2020	6/24/2025	Reimbursable		MSFC	SAA8-2032638
925			Evaluate Orbital Trajectory of Flight Experiment	11/19/2020	11/19/2022	Non-Reimbursable	\$31,414	MSFC	SAA8-2032636

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
926	32583	RUAG Space USA, Inc	RUAG Bi-Sector Modal	10/29/2020	10/29/2021	Reimbursable		MSFC	SAA8-1829459.3
927		ARCTIC SLOPE TECHNICAL SERVICES, INC.	demonstrating the use of artifical intellegence computer software for space flight systems	9/28/2020	9/28/2022	Non-Reimbursable	\$307,089	MSFC	SAA8-2032551.1
928	1 4 / 5 5 1	ARCTIC SLOPE TECHNICAL SERVICES, INC.	artifical intellegence computer software for space flight systems	9/28/2020	9/28/2025	Non-Reimbursable	\$0	MSFC	SAA8-2032551
929	32353	Cullman Area Technology Academy	TO PRODUCE HARDWARE OR OTHER USEFUL PRODUCTS UNDER THE HIGH SCHOOLS UNITED WITH NASA TO CREATE HARDWARE (HUNCH) PROGRAM	9/23/2020	9/23/2025	Non-Reimbursable	\$72,338	MSFC	SAA8-2032353
930	32182	BLUE ORIGIN, LLC	Blue Origin TCA v2.0	7/7/2020	7/7/2022	Reimbursable		MSFC	SAA8-1725986.25

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
931	32156	Imperx, Inc.	Rugged Space Rated High Definition – Serial Data Interface (HD-SDI) Camera	5/11/2020	5/11/2022	Non-Reimbursable	\$239,458	MSFC	SAA8-2032156
932	32095	Blue Origin Florida, LLC	Production Implementation	6/11/2020	6/11/2022	Reimbursable		MSFC	SAA8-2032094.1
933	32094	Blue Origin Florida, LLC	Production Implementation	6/11/2020	6/11/2025	Reimbursable		MSFC	SAA8-2032094
934	32084	ATK Launch Systems	ATK Hot Gas Testing	6/4/2020	6/4/2022	Reimbursable		MSFC	SAA8-1931535.2
935	32069		Annex to FASTRAC Powerpack Testing and Aerospike Nozzle Analysis in Support of USAF ARISE Program		3/24/2022	Reimbursable		MSFC	SAA8-2031673.2

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CHNIER	CENTER TRACKING NUMBER (IF ANY)
936 32023	Vivace Corporation	Amendment 2 to Vivace SAA8-1725627 to extend the Term of Agreement and update the Financial Obligations	6/9/2017	6/30/2021	Reimbursable		MSFC	SAA8-1725627.A2
937 31926	HUNTSVILLE CITY SCHOOLS	Huntsville City School for High Schools United with NASA to Create Hardware (HUNCH) Program - Grissom Annex	6/16/2021	6/16/2026	Non-Reimbursable	\$72,338	MSFC	SAA8-2031925.2
938 31925	HUNTSVILLE CITY SCHOOLS	TO PRODUCE HARDWARE OR OTHER USEFUL PRODUCTS UNDER THE HUNCH (HIGH SCHOOLS UNITED WITH NASA TO CREATE HARDWARE) PROGRAM	6/16/2021	6/16/2026	Non-Reimbursable	\$0	MSFC	SAA8-2031925
939 31862		Provide NASA expertise in lunar cargo transportation and landing technologies	6/4/2020	6/4/2022	Reimbursable		MSFC	SAA8-1930516.2
940 31673	KT Engineering Corporation	FASTRAC Powerpack Testing and Aerospike Nozzle Analysis in Support of USAF ARISE Program	2/5/2020	2/5/2023	Reimbursable		MSFC	SAA8-2031673

	M ID IMBER	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
941 316	055 Oceangate	Oceangate Automated Fiber Placement Development	2/4/2020	2/4/2022	Reimbursable		MSFC	SAA8-2031655
942 316	University of Louisiana at Lafaye	tte SAA8-2031653.1 Thermophysical Properties Measurements of Lightweight Metal Alloys	10/19/2020	10/19/2021	Reimbursable		MSFC	SAA8-2031653.1
943 316	University of Louisiana at Lafaye	SAA8-2031653 Thermophysical Properties tte Testing in the Electrostatic Levitation Laboratory	10/19/2020	10/19/2025	Reimbursable		MSFC	SAA8-2031653
944 316	649 BLUE ORIGIN, LLC	Extreme Environment Testing and Evaluation of Material Properties	12/11/2019	12/11/2022	Reimbursable		MSFC	SAA8-1931648.1
945 316	648 BLUE ORIGIN, LLC	Extreme Environment Testing and Evaluation of Material Properties	12/11/2019	12/11/2024	Reimbursable		MSFC	SAA8-1931648

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
946	31571	INTUITIVE MACHINES, LLC	Development of Lunar Lander Systems Technologies	3/19/2020	3/19/2025	Reimbursable		MSFC	SAA8-2031571
947	31535	ATK Launch Systems	Exchange of Technical Expertise for commercial space transportation	12/9/2019	12/9/2024	Reimbursable		MSFC	SAA8-1931535
948	31492		Valve testing for development of the Blue Origin engines	7/23/2020	7/23/2022	Reimbursable		MSFC	SAA8-1725986.19
949	31336	Florida Institute of Technology	Vision-Based Navigation for Formation Flight onboard ISS	1/16/2020	1/16/2023	Non-Reimbursable	\$170,172	MSFC	SAA8-1931336
950	31299	Ursa Major Technologies	Support of ROCETS software	10/30/2019	10/30/2021	Reimbursable		MSFC	SAA8-1931298.1

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
951	31298	Ursa Major Technologies	Rocket Engine Development Support	10/30/2019	10/30/2024	Reimbursable		MSFC	SAA8-1931298
952		Ball Aerospace & Technologies Corporation	Space Environmental Effects Testing and Material Characterization of Spacecraft Materials and Instruments	1/27/2020	1/27/2023	Reimbursable		MSFC	SAA8-1931239
953	31222	BLUE ORIGIN, LLC	annex to Exchange of Technical Expertise for commercial space transportation	11/20/2019	11/20/2021	Reimbursable		MSFC	SAA8-1725986.18
954	31171	BLUE ORIGIN, LLC	annex to Exchange of Technical Expertise for commercial space transportation	9/27/2019	8/30/2022	Reimbursable		MSFC	SAA8-1725986.17
955	31130	SPACE SYSTEMS LORAL, LLC	Room-Temperature-Vulcanized (RTV) Adhesive Coating Material Test	10/21/2019	12/31/2021	Reimbursable		MSFC	SAA8-1931129.1

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
956	31129	SPACE SYSTEMS LORAL, LLC	Space Environmental Effects Testing and Characterization of Material, Power, and Communication Systems	10/21/2019	10/21/2024	Reimbursable		MSFC	SAA8-1931129
957		U.S SPACE AND ROCKET CENTER	USSRC OPERATE AS MARSHALL SPACE FLIGHT CENTER OFFICIAL VISITOR CENTER	1/26/2021	1/26/2026	Non-Reimbursable	\$117,037	MSFC	SAA8-2031097.1
958		U.S SPACE AND ROCKET CENTER	ALABAMA SPACE SCIENCE EXHIBIT COMMISSION	1/26/2021	1/26/2026	Non-Reimbursable	\$0	MSFC	SAA8-2031097
959	30996	PaR Systems LLC	PaR Systems LLC	1/1/2020	12/31/2024	Reimbursable		MSFC	SAA8-1930996
960	30899	RHA Materials, LLC	NEW ESL Measurements of Thermophysical Properties of Material 1	11/30/2020	11/30/2021	Reimbursable		MSFC	SAA8-1930898.1

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961 30898	TPH// Materials 111	Non-contact measurements of thermophysical properties of materials	11/30/2020	11/30/2025	Reimbursable		MSFC	SAA8-1930898
962 30814	FIRST RF Corporation	High Speed Particle Material Impact Testing	9/25/2019	9/25/2022	Reimbursable		MSFC	SAA8-1930814
963 30520	Spirit Aero Systems	annex for weld development in Aeronautical/Aerospace Vehicle Manufacturing	9/3/2019	9/3/2021	Reimbursable		MSFC	SAA8-1828434.2
964 30516	INC	Engineering Analysis and development for Commercial Lunar Lander and Payload Services	1/27/2020	1/27/2025	Reimbursable		MSFC	SAA8-1930516
965 30492		annex to Aerospace Hardware Testing, Evaluatioin, and related engineering services	9/13/2019	3/22/2022	Reimbursable		MSFC	SAA8-1724760.3

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
966	30258	Amazon Web Services, Inc.	THE DISCOVERY, ACCESS AND USE OF LARGE SCIENCE DATASETS	1/6/2020	1/6/2022	Non-Reimbursable	\$675,455	MSFC	SAA8-1929988.1
967	30239	Virgin Orbit, LLC	annex to Exchange of Technical Expertise for commercial space transportation	7/30/2019	7/30/2021	Reimbursable		MSFC	SAA8-1725209.9
968	30233	BLUE ORIGIN, LLC	Blue Origin On Demand Services	7/9/2019	7/9/2022	Reimbursable		MSFC	SAA8-1830232.1
969	30232	BLUE ORIGIN, LLC	DEMAND SERVICES AND GENERAL SUPPORT TO TEST STAND 4670	7/9/2019	7/9/2024	Reimbursable		MSFC	SAA8-1830232
970		Cellco Partnership d/b/a Verizon Wireless	FOR OPERATION OF TELECOMMUNICATIONS EQUIPMENT IN BUILDING 4476	11/26/2019	11/26/2024	Reimbursable		MSFC	SAA8-1930143

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
971	30136	Interstellar Technologies Corporation	Propulsion Engineering Analysis, Consultation, Feasibility Studies and Space Vehicle Development Activities	9/18/2019	9/18/2024	Reimbursable		MSFC	SAA8-1930136
972		NEW CINGULAR WIRELESS PCS, LLC	Placement of Telecommunications antenna on building 4476	12/18/2019	12/18/2024	Reimbursable		MSFC	SAA8-1930098
973	30023		Alabama A&M Annex 2 for Inert propellant mechanical property support	5/28/2019	7/19/2022	Non-Reimbursable	\$500	MSFC	SAA8-1726018.2
974	30011	Google LLC	THE DISCOVERY, ACCESS AND USE OF LARGE SCIENCE DATASETS	10/21/2019	10/21/2024	Non-Reimbursable	\$0	MSFC	SAA8-1930011
975	29999	RUAG Space USA, Inc	RUAG Centaur V Structural Tests	9/10/2019	9/10/2021	Reimbursable		MSFC	SAA8-1829459.2

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	I V P P C I P A C I P P P M P M I	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
976	29988	Amazon Web Services, Inc.	THE DISCOVERY, ACCESS AND USE OF LARGE SCIENCE DATASETS	1/6/2020	1/6/2022	Non-Reimbursable	\$0	MSFC	SAA8-1929988
977	29985	IN/IDEEDCHIEGTTE INCTITUTE OT	SPACE EXPLORATION TECHNOLOGY DEVELOPMENT IN MOTION MAGNIFICATION TECHNIQUES	5/28/2019	5/27/2022	Non-Reimbursable	\$67,372	MSFC	SAA8-1929985
978	174718	NATIONAL SECURITY LLC	ANNEX 3 under SAA8-1521657 for HIGH RESOLUTION FOCUSING OPTICS FOR ADVANCED PLASMA DIAGNOSTICS	6/10/2019	4/14/2022	Reimbursable		MSFC	SAA8-1521657.3
979	29535	United Launch Alliance	ULA Integrated Fluid System Test (IFST)	6/6/2019	6/6/2022	Reimbursable		MSFC	SAA8-1726580.5
980	29459	RUAG Space USA, Inc	Ruag Engineering Services	1/24/2019	1/24/2024	Reimbursable		MSFC	SAA8-1829459

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981	29279	Manned Space Flight Education Foundation Inc.	The Centennial Challenges Space Robotics Challenge	3/5/2019	3/5/2022	Non-Reimbursable	\$451,413	MSFC	SAA8-1829279
982	28565	BLUE ORIGIN, LLC	annex to Exchange of Technical Expertise for commercial space transportation	10/29/2018	8/30/2022	Reimbursable		MSFC	SAA8-1725986.10
983	28500	OBERLIN COLLEGE	Fireball Network Station at Oberlin College	8/7/2018	8/7/2023	Non-Reimbursable	\$2,268	MSFC	SAA8-1828500
984	28435	Spirit Aero Systems	Rivet replacement with friction stir welds	4/25/2019	4/25/2022	Reimbursable		MSFC	SAA8-1828434.1
985	28434	Spirit Aero Systems	Collaboration in Aeronautical Vehicle Manufacturing	4/25/2019	4/25/2024	Reimbursable		MSFC	SAA8-1828434

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986	28276	St. Bernard Sheriffs Department	St Bernard Sheriffs Department	7/12/2018	7/12/2023	Non-Reimbursable	\$2,932	MSFC	SAA8-1828276
987	28013	CITY OF NEW ORLEANS, LA	City of New Orleans, LA Temporary Emergency Shelter for City Employees at MAF	3/28/2019	3/28/2024	Non-Reimbursable	\$137,705	MSFC	SAA8-1828013
988	27934	UNIVERSITY OF PITTSBURGH	Fireball Network Station at Allegheny Observatory	10/4/2018	10/4/2023	Non-Reimbursable	\$1,701	MSFC	SAA8-1827934
989		University of North Carolina at Greensboro	Particle Impact Testing of Novel Nanocomposite Space Shielding Materials (ITF)	11/13/2019	11/13/2022	Reimbursable		MSFC	SAA8-1927851.1
990		University of North Carolina at Greensboro	ENGINEERING COLLABORATION	11/13/2019	11/13/2022	Reimbursable		MSFC	SAA8-1927851

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991	27801	Hands-On Science Center	Fireball Network Station	5/31/2018	5/31/2023	Non-Reimbursable	\$1,701	MSFC	SAA8-1827801
992	27799	HIRAM COLLEGE	Fireball Network Station at Hiram College	5/25/2018	5/25/2023	Non-Reimbursable	\$1,701	MSFC	SAA8-1827799
993	27793	AEROJET ROCKETDYNE, INC	Engine System Material in Collaboration with the AR-22 Project	5/23/2018	5/23/2023	Non-Reimbursable	\$75,162	MSFC	SAA8-1827793
994	27702	LOCKHEED MARTIN	WIND TUNNEL TESTING	5/22/2018	5/22/2023	Reimbursable		MSFC	SAA8-1827702
995	27659	Laboratory Testing Inc.	Testing and Evaluation of Material Properties in Extreme Environments	10/29/2018	10/29/2021	Reimbursable		MSFC	SAA8-1827658.1

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996 27658	Laboratory Testing Inc.	Testing and Evaluation of Material Properties in Extreme Environments	10/29/2018	10/29/2021	Reimbursable		MSFC	SAA8-1827658
997 27541		Design and manufacturing review for rocket engine components	6/11/2020	6/11/2022	Reimbursable		MSFC	SAA8-2027540.1
998 27540	SIERRA NEVADA CORPORATION	Rocket Engine Development and Test	6/11/2020	6/11/2025	Reimbursable		MSFC	SAA8-2027540
999 27478	Tochnical Contor	Northeast Arkansas Career and Technical Center / High Schools United with NASA to Create Hardware (HUNCH) Program.	2/27/2018	2/27/2023	Non-Reimbursable	\$70,471	MSFC	SAA8-1827478
1000 27244	United Launch Alliance	ULA Vulcan Upper Stage Test	2/21/2018	12/31/2021	Reimbursable		MSFC	SAA8-1726580.3

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1001		Lawrence Livermore National Security, LLC	Annex 2 under SAA8-1521657 for High Resolution Focusing Optics for Advanced Plasma Disgnostics	3/21/2018	4/14/2022	Reimbursable		MSFC	SAA8-1521657.2
1002	27194	Cimarron Composites	Cimarron Composites for Developing Advanced Technology For Engine Components	3/14/2018	3/14/2023	Reimbursable		MSFC	SAA8-1827194
1003	26940	LOCKHEED MARTIN	Lockheed Martin Corporation Commercial	2/1/2018	9/30/2022	Reimbursable		MSFC	SAA8-1826940
1004	26915		Aeroscience analysis of Vulcan vehicle operations	1/4/2018	1/4/2023	Reimbursable		MSFC	SAA8-1726915
1005	26805		Wide-field Meteor Network Station at Ben Davis Magnet Elementary School	1/19/2018	1/19/2023	Non-Reimbursable	\$11,295	MSFC	SAA8-1726805

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1006	26656	AUBURN UNIVERSITY	SPACE EXPLORATION TECHNOLOGY DEVELOPMENT	11/8/2017	11/8/2022	Non-Reimbursable	\$0	MSFC	SAA8-1726656
1007		Garland Independent School District	Annex 1 to High Schools United with NASA to Create Hardware (HUNCH) Collaboration Garland Independent School District	·11/27/2017	11/27/2022	Non-Reimbursable	\$64,786	MSFC	SAA8-1726603.1
1008		Garland Independent School District	High Schools United with NASA to Create Hardware (HUNCH) Collaboration - Garland Independent School District	11/27/2017	11/27/2022	Non-Reimbursable	\$0	MSFC	SAA8-1726603
1009	26580	United Launch Alliance	Launch Vehicle Manufacturing and Test Support	10/31/2017	10/31/2022	Reimbursable		MSFC	SAA8-1726580
1010	26149	Morgan County Schools	annex to High Schools United with NASA to Create Hardware (HUNCH) Collaboration - Morgan County Schools	8/9/2017	8/9/2022	Non-Reimbursable	\$61,065	MSFC	SAA8-1726148.1

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1011	26148	Morgan County Schools	High Schools United with NASA to Create Hardware (HUNCH) Collaboration - Morgan County Schools	8/9/2017	8/9/2022	Non-Reimbursable	\$0	MSFC	SAA8-1726148
1012	26082	Orbital Sciences Corporation, a wholly owned subsidiary of Orbital ATK	Cryogenically - Fueled Upper Stage Technologies	3/2/2018	3/2/2023	Reimbursable		MSFC	SAA8-1726082
1013	26057	Mt. Pleasant High Schools	Mt. Pleasant High School - Tennessee / High Schools United with NASA to Create Hardware (HUNCH) Program.	7/25/2017	7/25/2022	Non-Reimbursable	\$61,065	MSFC	SAA8-1726057
1014	26018	Alabama A&M University	Collaborative Agreement for Synergistic Technologies with Alabama A&M University	7/19/2017	7/19/2022	Non-Reimbursable	\$0	MSFC	SAA8-1726018
1015	25986	BLUE ORIGIN, LLC	Exchange of Technical Expertise for commercial space transportation	8/30/2017	8/30/2022	Reimbursable		MSFC	SAA8-1725986

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
1016	25911	AEROJET ROCKETDYNE, INC	Annex 1 under SAA8-1725910 for Integration Support	10/3/2017	12/31/2021	Reimbursable		MSFC	SAA8-1725910.1
1017	25910	AEROJET ROCKETDYNE, INC	Space Systems Technology Development and Demonstration	9/29/2017	9/29/2022	Reimbursable		MSFC	SAA8-1725910
1018	25627	Vivace Corporation	Vivace Corporation	7/1/2017	6/30/2021	Reimbursable		MSFC	SAA8-1725627
1019	25569	Orbital Telemetry, Inc	Telemetry Licensed Test and Modification Activities	7/31/2017	7/31/2022	Reimbursable		MSFC	SAA8-1725569
1020	25553	Raytheon Missile Systems	Raytheon Wind Tunnel Testing	6/16/2017	6/16/2022	Reimbursable		MSFC	SAA8-1725553

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1021	25438	Raytheon Missile Systems	Engineering Collaboration	6/28/2017	6/28/2022	Reimbursable		MSFC	SAA8-1725438
1022	25325	United Technologies Corp	NASA MSFC requests Loan of Flight Qual Unit - CO2 Compressor and Controller	3/1/2018	3/1/2023	Non-Reimbursable	\$125	MSFC	SAA8-1725325
1023	25209	Virgin Orbit, LLC	Exchange of Technical Expertise for commercial space transportation	6/9/2017	6/9/2022	Reimbursable		MSFC	SAA8-1725209
1024	25202	Dodge County School	Dodge County School - Georgia / High Schools United with NASA to Create Hardware (HUNCH) Program	4/11/2017	4/11/2022	Non-Reimbursable	\$61,065	MSFC	SAA8-1725202
1025	25200	Jonesboro High School	Jonesboro High School - Arkansas / High Schools United with NASA to Create Hardware (HUNCH) Program	4/11/2017	4/11/2022	Non-Reimbursable	\$50,610	MSFC	SAA8-1725200

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
1026	25199	Charles Henderson High School	Charles Henderson High School Troy, Alabama / High Schools United with NASA to Create Hardware (HUNCH) Program	4/24/2022	Non-Reimbursable	\$61,065	MSFC	SAA8-1725199
1027	1751UX	Alan Thornton Career Technical Center	Alan Thornton Career Technical Center Alabama / High Schools United with NASA to Create Hardware (HUNCH) Program	3/24/2022	Non-Reimbursable	\$61,065	MSFC	SAA8-1725198
1028	25152	University of Central Florida	Fireball Network Station at UCF 7/31/2017	7/31/2022	Non-Reimbursable	\$2,555	MSFC	SAA8-1725152
1029	25118	Walker County School District by and through the Walker County Board of Education	Fireball Network Station at Smith Planetarium 4/28/2017	4/28/2022	Non-Reimbursable	\$1,420	MSFC	SAA8-1725118
1030	25117	Association of Universities for Research in Astronomy	Fireball Network Station at KPNO 3/30/2017	3/30/2022	Non-Reimbursable	\$2,045	MSFC	SAA8-1725117

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	I V P P C I P A C I P P P I M P N I	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
1031	25108		Oak Ridge Board of Education for Robertsville Middle School - NASA-UNIQUE SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) ENGAGEMENT ACTIVITIES FOR STUDENTS	7/20/2017	7/20/2022	Non-Reimbursable	\$44,516	MSFC	SAA8-1725108
1032		Embry-Riddle Aeronautical University	Fireball Network Station at ERAU	7/31/2017	7/31/2022	Non-Reimbursable	\$2,420	MSFC	SAA8-1725059
1033	24979	Magnet Cove High School	Magnet Cove High School Arkansas / High Schools United with NASA to Create Hardware (HUNCH) Program	5/1/2017	5/1/2022	Non-Reimbursable	\$61,065	MSFC	SAA8-1724979
1034	24760	The Boeing Company	Aerospace Hardware Testing, Evaluatioin, and related engineering services	3/22/2017	3/22/2022	Reimbursable		MSFC	SAA8-1724760
1035	24581	Blue Origin, LLC	Blue Origin, LLC Use of the National Center for Advanced Manufacturing (NCAM) at MAF.	1/13/2017	9/30/2021	Reimbursable		MSFC	SAA8-1724581

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1036			Annex 1 under SAA8-1724270 for Development of High Resolution X-Ray Mandrel	7/25/2017	12/31/2021	Reimbursable		MSFC	SAA8-1724270.1
1037		Lawrence Livermore National Security, LLC	High Resolution X-Ray Optics Support	7/25/2017	7/25/2022	Reimbursable		MSFC	SAA8-1724270
1038	23999		Propulsion System Elements Development and Analysis	10/20/2016	10/20/2021	Reimbursable		MSFC	SAA8-1623999
1039		Arizona Board of Regents, On Behalf of University of Arizona	Fireball Network Station at MMTO	10/27/2016	10/27/2021	Non-Reimbursable	\$2,045	MSFC	SAA8-1623799
1040	23798	Arizona Board of Regents on behalf of The University of Arizona	Fireball Network Station at MLO	10/27/2016	10/27/2021	Non-Reimbursable	\$2,045	MSFC	SAA8-1623798

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
1041	23444		COLLABORATIVE AGREEMENT FOR SYNERGISTIC TECHNOLOGIES	10/21/2016	10/21/2021	Non-Reimbursable	\$0	MSFC	SAA8-1623444
1042	22999	Teledyne Brown Engineering, Inc. Space Systems	Launch Vehicle Stage Adapter Manufacturing Support	8/2/2016	8/1/2021	Reimbursable		MSFC	SAA8-1622999
1043		Marshall Child Development Center Inc.	Marshall Child Development Center	7/14/2016	7/13/2022	Non-Reimbursable	\$819,115	MSFC	SAA8-1622752
1044	22716	New Mexico State University	Fireball Network Station	7/14/2016	7/14/2021	Non-Reimbursable	\$1,495	MSFC	SAA8-1622716
1045	22487	Blade Dynamics, LLP	Blade Dynamics, LLP Occupancy and Demand Services	8/31/2016	9/30/2022	Reimbursable		MSFC	SAA8-1622487

	M ID IMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
1046 216	~~ 0		HIGH RESOLUTION FOCUSING OPTICS FOR ADVANCED PLASMA DIAGNOSTICS	4/14/2016	4/14/2022	Reimbursable		MSFC	SAA8-1521657.1
1047 216			HIGH RESOLUTION FOCUSING OPTICS FOR ADVANCED PLASMA DIAGNOSTICS	4/14/2016	4/14/2022	Reimbursable		MSFC	SAA8-1521657
1048 215	591	Limestone County Schools	Limestone County Career Technical Center annex 1 - Limestone County Schools / High Schools United with NASA to Create Hardware (HUNCH) Program	2/3/2017	2/3/2022	Non-Reimbursable	\$27,777	MSFC	SAA8-1521590.1
1049 215	590	Limestone County Schools	Limestone County Schools / High Schools United with NASA to Create Hardware (HUNCH) Program umbrella	2/3/2017	2/3/2022	Non-Reimbursable	\$0	MSFC	SAA8-1521590
1050 213	380		Centennial Challenges for The Tissue Engineering Challenge	2/17/2016	9/30/2021	Non-Reimbursable	\$756,555	MSFC	SAA8-1521380

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
1051 21246	Lockheed Martin Corporation	Lockheed Martin Corporation Annex 4	10/1/2015	9/30/2021	Reimbursable		MSFC	SAA8-1620107.4
1052 21057	Lockheed Martin Corporation	annex to Lockheed Martin Corporation Orion Project	10/1/2015	9/30/2021	Reimbursable		MSFC	SAA8-1620107.1
1053 20906		Lockheed Martin Corporation Annex 3 for support services	10/1/2015	9/30/2021	Reimbursable		MSFC	SAA8-1620107.3
1054 20901	Lockheed Martin Corporation	Lockheed Martin Corporation Annex 2 for support services Orion Tooling Installation	10/1/2015	9/30/2021	Reimbursable		MSFC	SAA8-1620107.2
1055 20107	Lockheed Martin Corporation	Lockheed Martin Corporation Orion Project	10/1/2015	9/30/2021	Reimbursable		MSFC	SAA8-1620107

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1056 19465	Ochsner Clinic Foundation	Ochsner Clinic Foundation providing on-site medical services	11/1/2016	11/1/2021	Reimbursable		MSFC	SAA8-1619465
1057 4165	Development	Cooperative Endeavor Agreement University of New Orleans Research & Technology Foundation, Inc.		12/18/2037	Non-Reimbursable		MSFC	SAA8-074165
1058 34292		Louisiana Transfer Technology Office for Occupancy of SSC Facilities	5/2/2021	5/2/2026	Reimbursable		SSC	SSAA-1051-0089
1059 34213		Annex One Firehawk Propulsion Test Support Services	3/25/2021	3/25/2022	Reimbursable		ssc	SSAA-1053-0186
1060 34212	Firehawk Aerospace, Inc.	Reimbursable Umbrella Agreement Firehawk Aerospace, Inc. for Rocket Propulsion Testing	3/25/2021	3/25/2023	Reimbursable		SSC	SSAA-1053-0185

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1061	33910	Launcher Space	Annex Two for Propulsion Test Support to Launcher Space	1/27/2021	1/27/2023	Reimbursable		SSC	SSAA-1053-0181
1062	33761	Virgin Orbit	Annex Two to Reimbursable Umbrella Space Act Agreement between NASA Ames Research Center and Virgin Orbit, LLC for Propulsion Test Support at SSC		11/23/2022	Reimbursable		SSC	SSAA-1053-0180
1063	33619	BLUE ORIGIN, LLC	Annex Six to Blue Origin Umbrella, LOX Duct Flow Testing	12/8/2020	12/8/2022	Reimbursable		SSC	SSAA-1053-0179
1064	32234		Annex Three to Non-Reimbursable Space Act Umbrella Agreement Infinity Science Center, Inc. for Framework on a Regional Partnership	7/7/2020	7/7/2025	Non-Reimbursable	\$37,450	SSC	SSAA-1053-0173
1065	32233	INFINITY SCIENCE CENTER, INC	Annex Two to Non-Reimbursable Space Act Umbrella Agreement Infinity Science Center, Inc. for Framework on a Regional Partnership		7/7/2025	Non-Reimbursable	\$595,711	SSC	SSAA-1053-0172

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
1066	32181	INFINITY SCIENCE CENTER, INC	Annex One to Nonreimbursable Space Act Umbrella Agreement Between Infinity Science Center for Framework on a Regional Partnership	7/7/2020	7/7/2025	Non-Reimbursable	\$394,746	SSC	SSAA-1053-0171
1067	32180	Infinity Science Center, Inc.	Non-Reimbursable Space Act Umbrella Agreement Infinity Science Center, Inc. for Framework on a Regional Partnership	7/7/2020	7/7/2025	Non-Reimbursable	\$0	SSC	SSAA-1053-0170
1068	32137	Launcher Space	Annex One Propulsion Test Support to Launcher Space	3/31/2020	3/31/2022	Reimbursable		SSC	SSAA-1053-0175
1069	32136	Launcher Space	Propulsion Test Support to Launcher Space	3/31/2020	3/31/2025	Reimbursable		SSC	SSAA-1053-0174
1070		MISSISSIPPI STATE UNIVERSITY	Annex One for Use of Restricted Airspace at John C. Stennis Space Center	1/14/2020	11/20/2022	Reimbursable		SSC	SSAA-1051-0082

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1071		MISSISSIPPI STATE UNIVERSITY	Umbrella Agreement for Restricted Airspace at John C. Stennis Space Center	1/14/2020	1/14/2025	Reimbursable		SSC	SSAA-1051-0081
1072	30466	RELATIVITY SPACE, INC	Host Tenant Agreement Between National Aeronautics and Space Administration John C. Stennis Space Center and Relativity Space, Inc.	5/28/2019	5/28/2028	Reimbursable		SSC	SSAA-1053-0165
1073	30455	BLUE ORIGIN, LLC	Annex Three to Blue Origin Umbrella Rocket Propulsion Testing and Related Services	9/17/2019	9/17/2021	Reimbursable		SSC	SSAA-1053-0167
1074	30052	Interstellar Technologies, LLC	Propulsion Engineering and Testing Support	5/6/2019	5/6/2024	Reimbursable		SSC	SSAA-1053-0162
1075	29966	Relativity Space Incorporated	Reimbursable Space Act Agreement Relativity Space, Inc. for Occupancy of Facilities	5/28/2019	5/28/2028	Reimbursable		SSC	SSAA-1053-0164

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1076	28381	State of Mississippi Technology Transfer Office	Use Permit Between National Aeronautics and Space Aministration and State of Mississippi Technology Transfer Office	6/12/2018	4/19/2023	Reimbursable		SSC	SSAA-1051-0079
1077	28380	STATE OF MISSISSIPPI Technology Transfer Office	Host Tenant Agreement Between the National Aeronautics and Space Administration John C. Stennis Space Center and State of Mississippi Technology Transfer Office	6/12/2018	4/19/2023	Reimbursable		SSC	SSAA-1051-0078
1078	28334	BLUE ORIGIN, LLC	Blue Origin Umbrella Rocket Propulsion Testing and Related Services	6/29/2018	6/29/2023	Reimbursable		SSC	SSAA-1053-0154
1079		STRATOLAUNCH SYSTEMS CORP	Annex Two to Reimbursable Space Act Umbrella Agreement Between The National Aeronautics and Space Administration John C. Stennis Space Center and Stratolaunch Systems Corporation for Propulsion Testing Support		5/11/2022	Reimbursable		SSC	SSAA-1053-0153
1080	27516	STATE OF MISSISSIPPI	Use of NASA facilities and services in support of the Mississippi Technology Transfer Office	4/9/2018	4/19/2023	Reimbursable		SSC	SSAA-1051-0077

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1081	27333	THE BOEING COMPANY	Reimbursable Space Act Umbrella Agreement Between the National Aeronautics and Space Administration, John C. Stennis Space Center and the Boeing Company for engineering, propulsion test and related services	3/21/2018	3/21/2023	Reimbursable		SSC	SSAA-1053-0149
1082	26831	RELATIVITY SPACE, INC	Annex Two RSI Services and support at SSC	5/25/2018	8/23/2021	Reimbursable		SSC	SSAA-1053-0152
1083			CONSOLIDATION OF REMEDIATION ACTIVITIES AT THE JOHN C. STENNIS SPACE CENTER	1/2/2018	1/2/2023	Non-Reimbursable	\$75,000	SSC	SSAA-1051-0073
1084	26430	Hancock County Mississippi	For Hancock County EOC Continuity Site	3/19/2018	3/19/2023	Non-Reimbursable	\$0	SSC	SSAA-1051-0068
1085	26415	Infinity Science Center, Inc.	Land Use Permit Between National Aeronautics and Space Administration Stennis Space Center and the Infinity Science Center, Inc.	9/10/2007	9/10/2037	Reimbursable		SSC	SSAA-1053-0035

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1086		STRATOLAUNCH SYSTEMS CORP	Reimbursable Space Act Umbrella Agreement Between The National Aeronautics and Space Administration John C. Stennis Space Center and Stratolaunch Systems Corporation for Propulsion Testing Support	9/13/2017	9/13/2022	Reimbursable		SSC	SSAA-1053-0139
1087		The Board of Trustees of Mississippi Institutions of Higher Learning	The Center of Higher Learning and Related University Activities	11/29/2017	11/29/2022	Reimbursable		SSC	SSAA-1051-0066
1088	25252	Innovative Imaging and Research Corporation	Reimbursable Space Act Agreement Between National Aeronautics and Space Administration for Utilization of Satellite Calibration Target at SSC Center Landfill and Controlled Airspace	3/16/2017	3/6/2022	Reimbursable		SSC	SSAA-1053-0128
1089	23377	Relativity Space, Incorporated	Annex One Relativity Space Aeon 1 Engine Start Test Project	8/23/2016	8/23/2021	Reimbursable		SSC	SSAA-1053-0118
1090	23376	Relativity Space, Incorporated	Reimbursable Space Act Umbrella Agreement Relativity Space Incorporated Aeon 1 Launch Systems Development	8/23/2016	8/23/2021	Reimbursable		SSC	SSAA-1053-0117

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1091	23222	Honeywell Internationl Incorporation	Cross-Center Umbrella Agreement to Support NASA Science Technology Engineering and Mathematics (STEM) Education and Outreach	10/7/2016	10/7/2021	Non-Reimbursable	\$0	SSC	SSAA-1053-0114
1092	22308	AEROJET ROCKETDYNE OF DE, INC	Occupancy of Facilities	6/13/2016	10/15/2021	Reimbursable		SSC	SSAA-1053-0112
1093	18253	Lockheed Martin Corporation	Domestic Reimbursable Space Act Agreement (With Amendments) Between NASA SSC and Lockheed Martin Corporation for Its Division, Lockheed Martin Space Systems Company Concerning Support to the Propulsion, Thermal, and Metrology Center	1/30/2001	1/30/2051	Reimbursable		SSC	SSC/PRI-01-002-06
1094	11567	Infinity Science Center, Inc.	Nonreimbursable Space Act Agreement Between for Operation of Infinity at Stennis Space Center	1/10/2012	1/10/2032	Non-Reimbursable		SSC	SSAA-1053-0044
1095	1/1Xh/1	MISSISSIPPI STATE UNIVERSITY	Reimbursable Space Act Agreement Between National Aeronautics and Space Administration John C. Stennis Space Center and Mississippi State University and Mississippi State University Research & Technology Corporation for the Northern Gulf Institute	1/22/2009	1/22/2024	Reimbursable		SSC	SSAA-1051-0034

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1096	3110	Rolls-Royce North America, Inc.	Domestic Reimbursable Space Act Agreement Between NASA SSC and Rolls- Royce North America, Inc. for Testing at the H1 Complex by Rolls-Royce North America, Inc.	6/13/2005	6/13/2025	Reimbursable		SSC	SSAA-1053-0015
1097	3094	Aerojet Rocketdyne of DE, Inc.	Reimbursable Space Act Agreement RS-68 Engine Test Program (includes ADDENDUMS) at B-1	5/18/1998	5/16/2023	Reimbursable		SSC	SSC/PRI-98-005-03
1098	2566	Aerojet Rocketdyne of DE, Inc.	Operation of E-6 Government-Owned Engine Test Facility in Florida	6/29/2007	6/16/2022	Non-Reimbursable		SSC	SSAA-1053-0033
1099	33131	Salisbury University	Test Weather Station (MESONET) system for automated weather and environmental monitoring.	11/12/2020	11/11/2025	Non-Reimbursable	\$30,000	WFF	GSFC-20-33131
1100		Blue Ridge Research and Consulting, LLC	Improving Rocket Launch Acoustic Models and Interpreting Raw Acoustical Data	5/1/2020	4/30/2025	Non-Reimbursable	\$12,290	WFF	GSFC-20-32318

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1101	32248	Sagrad, Inc.	Range Certification Support of NASA Autonomous Flight Terminations Systems	4/29/2020	4/29/2022	Non-Reimbursable	\$1,150,000	WFF	GSFC-20-32248
1102		GULFSTREAM AEROSPACE CORP	annex to Water Ingestion Testing	4/13/2020	4/13/2022	Reimbursable		WFF	GSFC-17-25048 Annex
1103	28618	Vector Launch, Inc.	Flight Safety Analysis for Launch Vehicle	11/13/2018	11/13/2021	Reimbursable		WFF	GSFC-18-28618
1104	26250	Virginia Department of Health	Closed Points of Dispensing (POD) Provision of Emergency Medical Prophylaxis	7/20/2017	7/20/2022	Non-Reimbursable	\$2,000	WFF	
1105	25827	University of Massachusetts, Lowell	Further Development of Technology to Support the CubeSat Arcsecond Pointing System (CAPS)	10/26/2017	10/27/2022	Non-Reimbursable	\$15,000	WFF	GSFC-17-25827

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1106		V A COMMERCIAL SPACE FLIGHT AUTHORITY	Operations and Activities for the Unmanned Aerial System Runway	1/9/2018	1/9/2023	Reimbursable		WFF	GSFC-17-25541
1107		VIRGINIA SPACE FLIGHT ACADEMY	Outreach Activities	6/7/2017	6/6/2022	Non-Reimbursable	\$4,038	WFF	GSFC-17-25526
1108		GULFSTREAM AEROSPACE CORP	Water Ingestion Testing	4/13/2017	4/13/2022	Reimbursable		WFF	GSFC-17-25048
1109	12103	CELLCO/Verizon	Enhanced Use Lease Agreement/Cellco- Verizon for Greenbelt	9/21/2011	9/21/2026	Reimbursable		WFF	
1110	9404	Accomack County Department of Public Safety	Joint Emergency Planning, Response, and Management Activities at the Wallops Flight Facility	10/20/2011	10/13/2021	Reimbursable		WFF	

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1111	3646	Marine Science Consortium	Marine Science Consortium	2/13/2006	2/16/2022	Reimbursable		WFF	SAA-GSFC-06-3646
1112	3219	Chincoteague Bay Field Station	Wallops Research Park	5/6/2009	5/6/2069	Reimbursable		WFF	3219
1113	34328	ZINI TECHNIOLOGIES, INC	NASA-STD-2007-213740 Oxygen Compatibility Assessments / NASA-STD- 6001 Flammability, Offgassing, and Compatibility Requirements	5/6/2021	5/6/2026	Reimbursable		WSTF	SAA-RA-21-34327-01
1114	34327	ZIN TECHNOLOGIES, INC	WSTF Testing, Analysis, and Technical Expertise (Materials, Fluids, Components)	5/6/2021	5/6/2026	Reimbursable		WSTF	SAA-RA-21-34327
1115	32676	THE BOEING COMPANY	STP3 R40b Hot Fire Testing	4/29/2021	4/29/2022	Reimbursable		WSTF	SAA-RA-20-32676

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1116	32596	WHA INTERNATIONAL, INC	annex to Testing, Analysis Activities, and Exchange of Technical Expertse	11/2/2020	11/2/2021	Reimbursable		WSTF	SAA-RA-17-25227-04
1117	32278	THE BOEING COMPANY	Perform R40b thruster testing, provide test data results and ship thrusters.	7/15/2020	7/15/2022	Reimbursable		WSTF	SAA-RA-18-28204-02
1118	32046	AEROJET ROCKETDYNE, INC	annex to Space Systems Technology Development and Demonstration	3/12/2020	3/12/2022	Reimbursable		WSTF	SAA8-1725910-06
1119	31581	Infinite Composites Technologies	Annex for COPV Inspection and Evaluation	5/5/2020	5/5/2025	Reimbursable		WSTF	SAA-RA-20-31363-02
1120	31520	Johnson and Johnson	Testing of N2O4 per MIL-PRF-26539G	2/26/2020	2/26/2023	Reimbursable		WSTF	SAA-RA-20-31520

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
1121	31364	Infinite Composites Technologies	NASA-STD-2007-213740 Oxygen Compatibility Assessments / NASA-STD- 6001 Flammability, Offgassing, and Compatibility Requirements	5/5/2020	5/5/2025	Reimbursable		WSTF	SAA-RA-20-31363-01
1122	31363	Infinite Composites Technologies	WSTF Testing, Analysis, and Technical Expertise (Materials, Fluids, Components)	5/5/2020	5/5/2025	Reimbursable		WSTF	SAA-RA-20-31363
1123	31188	Intuitive Machines, LLC	NASA Standards 6001B Testing	11/23/2020	11/23/2025	Reimbursable		WSTF	SAA-RA-20-31187-01
1124	31187	Intuitive Machines, LLC	WSTF Testing, Analysis, and Technical Expertise (Materials, Fluids, Components)	11/23/2020	11/23/2025	Reimbursable		WSTF	SAA-RA-20-31187
1125	30649	B/E Aerospace, d.b.a.Collins Aerospace a unit of United Technologies Corporation	NASA-STD-6001 Flammability, Offgassing, Compatibility Testing and Training	3/31/2020	3/30/2025	Reimbursable		WSTF	SAA-RA-20-30648

	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
1126		B/E Aerospace, d.b.a. Collins Aerospace, a unit of United Technologies Corporation	Collins Aerospace Oxygen and COPV Testing, Analysis and Training Activities	3/31/2020	3/30/2025	Reimbursable		WSTF	SAA-RA-20-30648
1127	29610	AS and D, LLC	NASA's Composite Overwrapped Pressure Vessel (COPV) Damage Detection Course (DDC)	2/4/2019	2/4/2024	Reimbursable		WSTF	SAA-RA-19-29610
1128	28204	THE BOEING COMPANY	Perform R40b thruster testing and provide test data results.	9/13/2018	9/13/2023	Reimbursable		WSTF	SAA-RA-18-28204
1129	26448	WHA INTERNATIONAL, INC	Annex to Testing, Analysis Activities, and Exchange of Technical Expertse for COPV Training	9/7/2017	3/21/2022	Reimbursable		WSTF	SAA-RA-17-25227-02
1130	25435	Blue Origin, LLC	NASA-STD-6001 Flammability, Offgassing, Compatibility Testing, and Training	4/18/2017	4/18/2022	Reimbursable		WSTF	SAA-RA-17-25434-01

ROW PAM ID NO. NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE	TYPE OF AGREEMENT	TOTAL ESTIMATED DOLLAR VALUE	CENTED	CENTER TRACKING NUMBER (IF ANY)
1131 25434		TESTING, ANALYSIS ACTIVITIES, AND EXCHANGE OF TECHNICAL EXPERTISE	4/18/2017	4/18/2022	Reimbursable		WSTF	SAA-RA-17-25434
1132 25228	WHA International, Inc.	NASA-STD-6001 Flammability, Offgassing, and Compatibility Testing	3/21/2017	3/21/2022	Reimbursable		WSTF	SAA-RA-17-25227-01
1133 25227	WHA International, Inc.	Testing, Analysis Activities, and Exchange of Technical Expertse	3/21/2017	3/21/2022	Reimbursable		WSTF	SAA-RA-17-25227
1134 22312	Honeywell	NASA-STD-6001 Flammability, Offgassing, and Compatibility Requirements and Test Procedures	10/11/2016	10/11/2021	Reimbursable		WSTF	SAA-RA-16-22311-01
1135 22311		Honeywell NASA-STD-6001B, Vacuum Stability Testing and Training	10/11/2016	10/11/2021	Reimbursable		WSTF	SAA-RA-16-22311

ROW NO.	PAM ID NUMBER	PARTNER NAME	TITLE/PURPOSE	SIGNATURE DATE	EXPIRATION DATE		TOTAL ESTIMATED DOLLAR VALUE	CENTER	CENTER TRACKING NUMBER (IF ANY)
1136	22154		Celanese Chemical Division Process Enhancement Testing	11/7/2018	11/7/2021	Reimbursable		WSTF	SAA-RA-18-22154
1137	20648	Blue Origin, LLC	NONREIMBURSABLE SPACE ACT AGREEMENT BETWEEN BLUE ORIGIN, LLC AND NASA FOR THE LOAN OF NASA OWNED PRESSURE VESSELS	5/8/2017	5/8/2022	Non-Reimbursable	\$17,256	WSTF	SAA-RA-17-20648